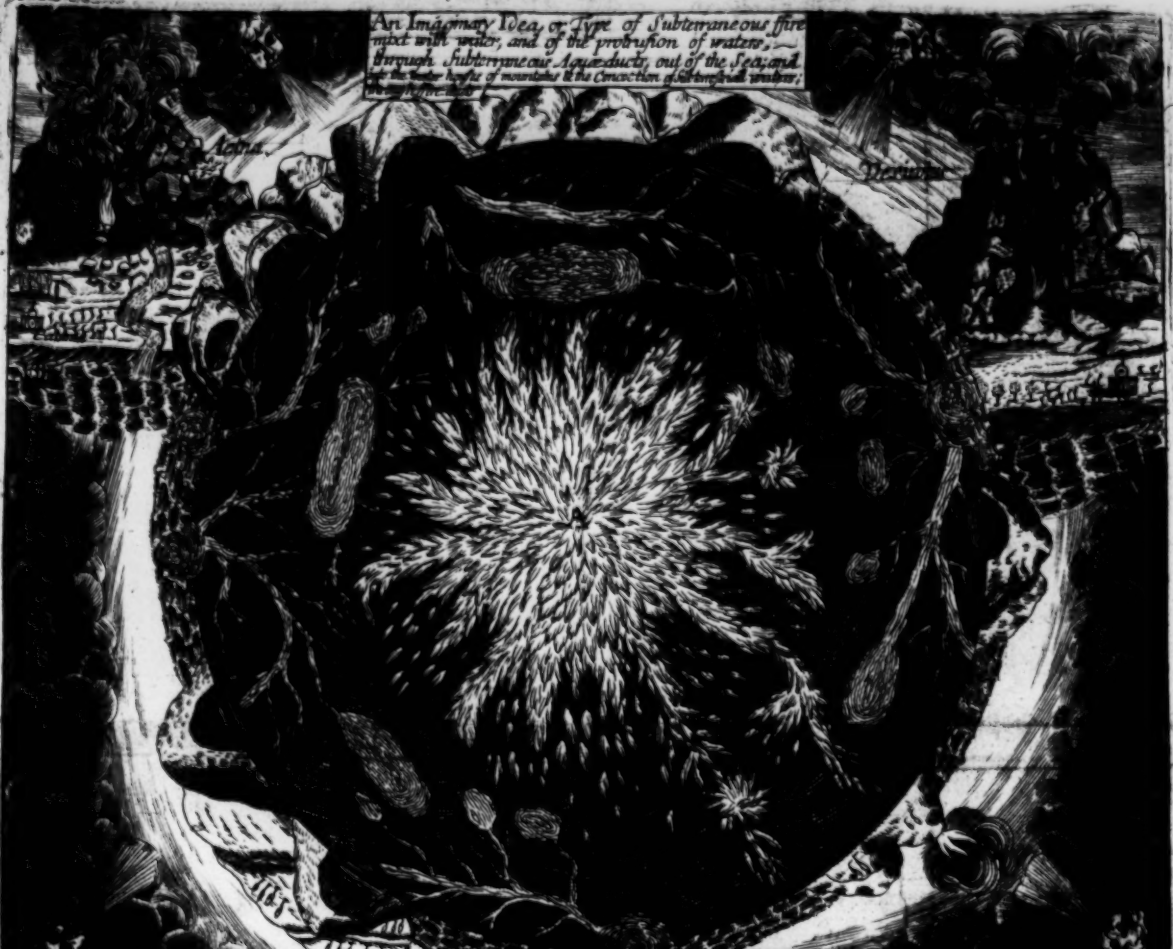
An Imaginary Idea, or Type of Subterraneous ffire
mixt with water, and of the protrusion of waters,
through Subterraneous Aquæducts, out of the Sea; and
Aetna

THE VULCANO'S: OR, Burning and Fire-vomiting MOUNTAINS, Famous in the World:

With their REMARKABLES.

Collected for the most part out of *KIRCHER'S Subterraneous World*;

And expos'd to more general view in *English*, upon the Relation of the late Wonderful and Prodigious Eruptions of *ÆTNA*.

Thereby to occasion greater admirations of the Wonders of Nature (and of the God of Nature) in the mighty Element of Fire.

Res semper aliquid apportat novi.

None sadlier knows the unresisted Ire,
Then Thou, Poor London! *of th' all-raging Fire.*
But these occasion'd kindlings are but Blazes,
To th' mighty Burnings, which fierce Nature raises.
If then a Town, or Hills blaze be so dire;
What will be th' last, and Universal Fire?

Licensed and Entred according to Order.

London, Printed by *J. Darby*, for *John Allen*; and are to be sold by him, at the *White Horse* in *Wentworth Street* near *Bell Lane*; And by *Benjamin Billingsly* at the *Printing-Press* in *Broad-street* near *Gresham-College*, 1669.

The Epistle to the READER.

HEre are presented to thee in English, *the most wonderful, most prodigious, and even miraculous Operations of Nature, in the Geocosm, or Terrestrial World.* 'Tis confess'd, 'tis not an exact, or compil'd History; But rather a scatter'd Collection of Historical Relations by others, of most remarkable passages. Which so came to pass: First, upon so fair an occasion given, by the late incredible Eruptions of Ætna, and past all belief: Had they not been confirmed by so honourable a Testimony, past all mistrust. And yet there were not wanting some such Persons, so unknowing and faithless; as to question, notwithstanding at first, all for a Rodamontado, or Isle of Pines, &c. Therefore, secondly also, by reason of so general and universal Ignorance of these Matters found among our Countreymen; as sufficiently appeared at the first coming forth of that wonderful Relation. As if some such strange thing had hapned, as never before in the World: at least never so great, so prodigious and portentous. That therefore men might be more generally acquainted with the Wonders of Nature, (in this particular also of Fire) has this been undertaken. And then because there had yet been none in English of the Subject, for the general information of men, or of such as were desirous to know fuller of these matters. And

yet there is a method sufficient for an exact History. Nor is there any thing Material, or Remarkable; that is not, in brief, at least taken notice of. Lastly, The Subject and Argument so admirable and curious, may excuse other defects. For that not so much the Philosophy of these Matters, (yet there is a sprinkling of that too, as occasionally it occur'd in our Author) as the mighty Effects and Things themselves are here intended for the English *Reader. 'Tis therefore an Historical Narration of the* Worlds Volcano's, *and their Wonders and Remarkables. But for the grand Literado's, and such as are past their* English *Tongue, let them be satisfied, that it was never calculated for men of their Degree and Elevation. So not to weary thee with Complements of a long Epistle, or to hang out Invitations of greater pretences, then realities; we leave thee to what entertainment the Book it self will afford. And if thou findst any occasion, not to repent, of so much time and labour as the perusal; By so much the farther will the Author be from repenting of his pains, or thinking his labour lost, that is, for no good or benefit to his Countreymen, in Englishing so wonderful things. He presumes to say; Read, and admire, and take the pleasure thereof.* Farewel.

The Explication of the Schemes, out of Kircher.

I.

THE Central Fire A, through certain Fire-ducts, or Channels, diffuses round about, every where, far and near fiery exhalations and spirits. These driven into the Water-houses, it partly disposes into hot Baths; partly attenuates or rarifies into vapours; which dashing, as it were, against the Arches or Vaults of Concavous Dens, and condens'd by the coldness of the place, and lastly dissolved into Waters, generate Fountains and Rivers; and then partly derived into fit Matrices and Receptacles, fruitful of other kind of Juyces, of several Minerals, contract fast together, and harden into Metallick Bodies; or else are ordered for a new Conception, and fructifying of combustible Matter, to nourish, and still feed and maintain the Fire. You see there also, how the Sea, by the Winds and pressure of the Air, or motion of the æstuating Tides, ejaculate and cast forth the Waters, through Subterraneous, or under-ground Burrows, into the highest Water-houses of the Mountains. You see also the Sea and the Plains in the utmost surface of the Earth, to take place next to the Subterraneous World; and the Air next to them, as the Scheme teaches: Yet you are not to imagine, that the Fires and Waters, *&c.* are really thus disposed in Nature underground. For whoever has seen them? But this onely was to signifie, according to the best imagination of the Author, that they are after some well-ordered and artificial, or organiz'd way or other, contriv'd by Nature; and that the Under-ground World is a well fram'd House, with distinct Rooms, Cellars, and Store-houses, by great Art and Wisdom fitted together; and not, as many think, a confused and jumbled heap or Chaos of things, as it were, of Stones, Bricks, Wood, and other Materials, as the rubbish of a decayed House, or an House not yet made.

And to the perpetuation of these hidden and unsearchable operations of Nature, there is a constant circulation and return round thereof. The Constellations, Sun, Moon, and Stars, cause the reciprocal flowings and Tides of the Sea to and fro. By the impetuousness

tuousness of the Seas rage and Tides, an immense bulk of Waters, being, through hid and occult passages at the bottom of the Ocean, protruded or thrust forcibly into the intimate bowels of the Earth, excites and stirs up also Subterraneous Fire by the impetuousness of Winds, and restores it with new conveyance of Nutriment. The Subterraneous Fire not knowing how to be idle, being enkindled by the reciprocation, or return to and fro, of the Tides, as it were by certain Bellows; and raging, does, by these, and those, and the other Fibres, or Veins of occult passages, which are replenished with Metallick and Mineral Juyces, carry, whiles it passes by, an huge plenty of vapors with it self; which protruded, partly through the Terrestrial Conveyances of the Mountains, partly through the bottom of the Ocean, into the uttermost Surface; and there dilated and spread wider, do again, with their blasts, solicite and provoke the Air, the Ocean, and Seas. And what is again insinuated through the Orifices of the Oceans bottom, doth convey new Provant to the Subterraneous Fire, to nourish and conserve it; and by this means also doth supply new matter to provoke and stir up the Sea again; (as but now was declar'd) You see therefore the manner and way of the Circulation of Nature. You see how Water, Fire; Fire, Water; mutually, as it were, cherish one another; and by a certain unanimous consent, conspire to the Conservation of the Geocosm, or Terrestrial World. For if Subterraneous Fire should emit no vapours for matters of Winds; The Sea, as it were torpid, and void of motion, would go into a putridness, to the ruine of the whole Globe. And consequently destitute of the aid of Winds, could neither also succour Subterraneous Fire, with necessary nutriment. Whence the Fire extinct, being the life of the *Macrocosm*, as spiritous blood is of the *Microcosm*, Universal Nature must necessarily perish. Lest therefore Nature, undergoing so great a detriment, should fail; Hereupon *God most good and great*, by provident Nature, the Hand-maid of the Supream Work-master, would have both Elements be in a perpetual Motion, for admirable ends, elsewhere shewn. For the Water sliding through the secret passages under ground, supplies moisture; and together therewith carries a mixture of Terrestrial portions to the *Fire-houses*, for their food. And these again swelling with hot Spirits, carried upwards, and elevated through wonted *Fire-ducts*, do with their heat cherish the *Water-houses*, and other kind of Receptacles, whether of Air, or several Juyces of Minerals and Earths, (for there are *Store-houses* of

of all under ground) and do animate them for the Generation both of Minerals, and also of Vegetables, to be promoted, or furthered by exhalations. And so in an everlasting, and circulatory motion, all things which are beheld in Nature, do exist and abide. And so Subterraneous Fire, together with Water, are the Effectors and Generators, we may say, of all things, *&c.*

II.

This Scheme expresses the Nests of Heat only, or, which is all one, the *Fire-houses*, variously distributed through the Universal Bowels of the Earth, by the admirable Workmanship of God; lest any where should be wanting what would be so greatly necessary to the Conversation of the Geocosm. But let none perswade himself, as if the Fires were constituted, as here represented; and the *Fire-houses* forthwith disposed in that order. In no wise this. We would onely hereby shew, that the bowels of the Earth are full of *Æstuaries*, that is, places overflown, and raging with Fire, which we call Under-ground Fire-houses, or Conservatories; whether after such, or any other manner disposed. From the Centre therefore we have deduc'd the Fire, through all the Paths (to be supposed) of the Terrestrial World; even to the very *Vulcanian* Mountains themselves, in the Exteriour Surface. The Central Fire is signed with the letter A. The rest are the *Aestuaries*, or *Fire-houses*, signed with B. The *Fire-ducts*, C. But the least Channels, are *Fissures*, or clefts of the Earth, which the Fiery Spirits pass, and make their way through.

A. *The Central Fire.*
B. *The Fire-houses.*
C. *The Fire-ducts.*
Fissures of the Earth, the rest.

The

The TABLE.

CHAP. I.

Of Subterraneous Fire-houses: That is, Abysses, or deep Storehouses of Fire: or, if you will, Aestuaries (that is, places overflown and raging with; or, as it were, Creeks of Fire) underground.

CHAP. II.

Of the Volcano's or Ignivomous, that is, Fire-vomiting Mountains in General.

CHAP. III.

Of the Manifold Volcano's of Italy *in Particular.*

CHAP. IV.

Of the Remarkables of Volcano's, and their Eruptions in General.

CHAP. V.

Of the Remarkables of the Volcano's of Italy, *and their notorious Eruptions in particular, &c. Viz.*

Of the Phlegræan Plains, or Volcano's Court.

Of the Mountain Vesuvius, *&c.*

CHAP. VI.

Of the Prodigious and Wonderful Ætna *in Special; and of the Vulcanian Islands adjoyning.*

Ætna's Crater or Fire-Cup.

A Chronicle of Ætna's *Fires, &c.*

Of the Volcanello's; Strombolo, *and* Volcano, *&c.*

A sad story of a Spanish *Priest, &c.*

A foolish Story of Sir Thomas Gresham.

The *VULCANO'S*:

OR,

Mountains vomiting Fire, famous in the World; with their Remarkables.

CHAP. I.

Of Subterraneous Abyſſes, and Conſervatories, or Store-houſes of Fire; the Original Cauſe and Sourſe of all fiery Eruptions, and Vulcano's.

THAT there are Subterraneous Conſervatories, and Treaſuries of Fire (even as well, as there are of Water, and Air, &c.) and vaſt Abyſſes, and bottomleſs Gulphs in the Bowels and very Entrals of the Earth, ſtored therewith, no ſober Philoſopher can deny; If he do but conſider the prodigious Vulcano's, or fire-belching Mountains; the eruptions of ſulphurous fires not only out of the Earth, but alſo out of the very Sea; the multitude and variety of hot Baths every where occurring. And that they have their ſourſe and birth-place, not in the Air, not in the Water; nay, nor as the Vulgar perſwade themſelves, not at the bottom of the Mountains; but in the very in-moſt privy-Chambers, and retiring places of the Earth, is as reaſonable to think; And there *Vulcan*, as it were, to have his Elaboratories, Shops, and Forges in the profoundeſt Bowels of Nature.

From what Signs Subterraneous Fire is gathered.

For how else could there be every where such a quantity of Minerals, brimstone, and sulphurous unctuous matters, without any fire and subterraneous burnings of fire-engendring, and all concocting nature; which by no means can be conceived to be enkindled, from the conflicts of air and moisture, in those most dark and deep Regions of the Earth, so remote from all influence of the Sun.

The necessity of Subterraneous Fire.

Therefore subterraneous fire was necessary to the internal Oeconomy, or constitution of, as it were, the organiz'd parts of the earth, and distribution of Life and heat, as we may so say, to all the exteriour members. *Plato* acknowledges hidden treasuries of ever-flowing flames, and most huge Rivers of fires, as well as of waters. Yea and *Aristotle* himself affirms most ample sources, as of water, so of spirit and fire. Also *Pliny*, *Vitruvius*, *Cicero*, have noted this *Arcanum* of nature; for in the bowels of the earth, are observed hidden operations of heat; and the greatest parts of the world are upheld and sustained by heat underneath. We see fire struck forth from the conflict and attrition of stones; and the reeking earth to smoke upon every new digging, especially if deep; And also hot and warm waters drawn out of Wells continually, and that chiefly in winter; for that a great force of heat is contain'd and pent up within the Caverns of the earth. All the Poetick Fables of *Vulcan*, *Vesta*, the *Cyclops*, seem to allude to this subterraneous fire.

Fire is no where wanting.

Fables of Poets allude to Subterraneous Fire.

This is the sense of *Lucretius* singing thus;

—— The Earth contains within it's Womb,
First Seeds, whence th' Sea, and flowing Rivers come
In constant course: Sources of Fire it has,
For burning Soyls we see in many a place.
But above all, Ætna's impetuous Cell,
Rages with flames from th' lowest pit of Hell.

And *Manilius*,

But with all parts the Fires mingled are,
Quick Lightning, in the teeming Clouds of th' Air,
They gender; Pierce the Earth; whence Ætna's Mountains,
Dare Heaven: Also make Baths hot, in Fountains.

The whole Earth is Cavernous.

To this end the whole Earth is Cavernous, and the Terrene Globe contains vast spaces within its own bowels, arched Caves and Vaults, immense Tracts, and impenetrable Abysses. For, as *Seneca* relates of

of the Fields of *Puteolum*, *There are vast Caves, hugh Recesses, and vacuities; Stones on Mountains hanging here and there; Also cragged Gapings without bottom, which have often receiv'd them, as they fell in, and buried the mighty Ruins in the deep.* For the whole Earth is not solid; but every where gaping, and hollow'd with empty rooms and spaces, and hidden burrows, as it were, whereto subscribes *Pliny*, *Ælian*, *Lucretius*, and other writers of Natural things. For the Fire and Water sweetly conspire together in mutual service, with an inviolable friendship and wedlock, for the good of the whole in their several and distinct private-lodgings, as we may so say, and hidden receptacles; spreading themselves far and wide to a vast largeness, and capacity; which two Associates, and Agents of Nature, with pains work and bring about such variety of things we see, of Minerals, Juyces, Marles, Glebes, and other soyls, with ebullitions, and bublings up of Fountains also. As *Manilius* but now sang to us.

The Wedlock of Fire and water within the Earth.

Sith this fire thus shut up in the Caverns of the Earth, agitating it self, when it finds passage, it never leaves penetrating unto some vent, for many hundred Miles, even under the Sea, and unpassable and far fetch'd windings and turnings of the Earth. And acquiring continually greater power, it turns the Earth, and even the very Stones and Mountains, it finds in its way, into easie fuel and nutriment: That except it were restrain'd by the encompassing of the Ocean, and the command of the Omnipotent Deity, it would attract and suck in the universal bulk, of all elementary Nature, into an unquenchable combustion, and Conflagration.

Subterraneous fire seeks passages for vent.

And there is need of such vast quantities of fires, for the uses of the Universe; And 'tis reasonable to think that the Divine Providence hath made a very great provision of fire in the belly of Nature, whence by long Chimnyes or Funnels, as it were, it might diffuse an infinite heat and fervour for the use of things necessary; and the emolument of the Earth, Men, and Beasts. Just as it hath constituted the vast Sea in such a manner so as to distribute an indeficient plenty of Waters, through the veins and channels of the whole body of the Earth. And as it hath appointed the Waters their bounds, so it hath so attempered and distributed these fires, in the hidden courses and apartments of subterrestrial Nature, that they might neither be suffocated by the infinuating and inflowing Waters of the Ocean, nor transgress their prescribed Limits and Confines: For otherwise, if they should be unlimitted Eruptions, they would soon turn all into Ruines.

The need and use thereof.

The last general Conflagration of the World.

Which shall at length come to pass, in that fulness of time, when all the Reins of unruly Nature shall be broke loose, and the Cataracts, or Flood-gates as it were, of subterraneous fire flung open; by the command of the Divine Power, not only the Earth, but even the Elements shall melt with fervent heat, to the ruine and destruction of the whole World. That even as in the universal Flood, the windows of Heaven, and Gulphs of the Abysses being opened, he destroyed the World by an Inundation of Waters, even so also, in the last times, he might destroy the same by a Deluge of Fires: which who could deny to be, if he should behold the perpetual boyling fires in the Earth; the vast burning of Provinces; Lastly, the manifest provision and preparation of so much Combustible matter, and Sulphur together, which is vomited forth, even at one Gaping and Eructation; without confessing it a certain and infallible Specimen and Example, and evident token of preparation to the total and final Conflagration prescribed by the Divine Wisdom.

The Prodigious Vulcano's therefore and Fire-vomitting Mountains visible in the external surface of the Earth, do sufficiently demonstrate it full of invisible and under-ground fires. For wherever there's a Vulcan, there also is a Conservatory, or Store-house under, as certain, as where there is a Chimney or smoke, there is fire; And argue deeper treasuries and storehouses of fire, in the very heart and inward bowels of the Earth. In so much that from hence the *Holy Father's* have not incongruously placed the greatest of all the Fire-conservative Abysses in the Centre of the Earth, for an eternal Jakes and Prison, destin'd for the punishment of the Damned; and some others for Purgatory (according to the received belief of Papists.)

Hell in the Center of the Earth, according to some.

Now flame is but flowing, or fluid fire, and the streaming efflux of sulphurous principles, or particles, &c. which from these burst forth in excessive raging streams, from the mouth of these Ignivomous (or fire-vomitting) Mountains, and Vulcano's; which are wonders of Nature, not unworthy generally to be known, and taken notice of, of all men. And which we now come to ennumerate, with their remarkable Phænomena's, and Eruptions.

CHAP.

CHAP. II.

Of Vulcano's in general; What, and where; In Asia, Africa, America, and Europe.

AS Nature hath constituted various Store-houses of Waters, in the highest Mountains; so it has distributed various Receptacles of fire, within the bowels of the highest Mountains also; for the compleat fructifying of Nature with this primigenial heat as it were, and radical moisture together, as before has been shewn. For the fire cannot subsist without the water, nor the water without the fire. 'Tis certain, if only the moist, or only the fiery element, should domineer, all would be laid wast, and nothing fructifie, &c. The Water would stagnete and freeze without some kindly resolving heat, and afford no warm and friendly vapours, and fruitful exhalations. And the fire cannot live, without a moist and humid nutriment, or last any time without a free and an asswaging fomentation, and breathing of the Air, and as it were ventilation.

The Fire and Waters mutual need and use.

And need of air, and breath, as it were.

These Vulcano's therefore are nothing but the vent-holes, or breath-pipes of Nature, to give vent to the superfluous choaking fumes and smoaky vapours, which fly upwards, and make way and free passage for the vehemency of the within-conceived burning; and for the attraction and free entrance of the friendly cherishing Air, to revive and ventilate those suffocating flames, lest they should continually shake the foundations of the Ground with intollerable commotions and Earthquakes. For Earthquakes are the proper effects of subterrestrial cumbustions. And so the fire is both exonerated of its superfluous clogg of fumes and dregs of dross, through those open and wide-mouthed Gulphs and Orifices, as it were through certain Jakes or common shoars; and also cherished and refreshed with the all-reviving Air; so serving as breath-pipes both for expiration and inspiration to the whole body of Nature, or the Universe.

Vulcano's are Breathing-Holes of Nature.

Earthquakes proper Effects of Sub erraneous fire.

Of this sort of Vent-holes, Chimneys, or Funnels, there are such a multitude and variety, that there's hardly any Region in the world without them.

Asia

Vulcano's of Asia, &c.

Asia, every where, in its several Regions, abounds with these vomiting Mountains of fire. *Persia* has divers Vulcano's. And in the Island *Armuzia:* The Island *Zeilan*, remarkable by the name of *Adam*; In *Persia* it self, many sulphurous Craters, or Cups, very terrible to Travellers; with *Susis* in *Media*, and *Cophantus* in the Region of the *Bactrians*, formidable to beholders.

In the *Moguls* Empire, in the Kingdom of *Ingoston*, *Tibet*, *Camboi*, every where these kind of Mountains; and in the most vast Kingdom of *China*. But especially the *Molucco*-and-*Philippine*-Islands, and the universal Archipelago of St *Lazarus*, so abounds with these Vulcanian places, that there's scarce an Island without them, either in the Crater's (or deep mouth'd Cups) and hellish ditches, if not upon the Mountains themselves. Also in the *Banda's*, whereof the Mountain *Gounapi* most eminent; in both the *Java's*, within the entrails of most high Mountains. The Mountain *Batalvanus* in *Sumatra:* The inaccessible Mountain in the Island *Terenate*. In the *Mauritian* Islands, the Mountain *Tola*. In *Tandaia*, nigh the Promontory of the Holy Ghost, are found some also; as also in the Island *Marindica*. Moreover in *Jappan*, no small number, near the City *Firandus*; and a famous one over against the City *Tanaxuma*, in one of the *Seven Sisters* (Islands so called) and several other circumjacent Islands every where; which through subterraneous Burrows or Channels have occult commerce with St. *Lazarus* Islands, in the Archipelago, even to new *Guiny*, and those called *Solomon's Islands*; and from thence to other Islands of the *Pacifick*, commonly call'd the *South Sea*. For in new *Guiny*, as also in the *Southern Land* are observed such Mountains, to the great astonishment of Mariners. And the like are seen in the vast *Southern Ocean*, or *South Sea*; In the *Indian Ocean* every where, Desert and Rockey Mountains discover their smoking Chimneys; even in the shores of Northren *Tartary* towards *Muscovy*, are frequent Vulcanello's; and in all the Ocean and Islands almost, &c. which we leave, and come to *Africa*.

The Vulcanian Mountains of Africa.

Where Eight famous Vulcano's are observ'd; Two in *Monomotopa*; Four in *Angola*, *Congus*, and *Guiny*; One in *Lybia*, and One in *Abessia*; besides innumerable Craters and sulphurous Dens, every where obvious; some whereof having consum'd their combustible matter, have ceas'd; again to re-inkindle when they shall have ripen'd and concocted again their recruited matter and fuel. The *Atlantick Sea* so abounds with subterraneous Fires, that *Pla'o's*

Land,

Land, call'd *Atlantick*, seems to have been swallow'd up from no other cause; but the outrages of these fires and earthquakes thence arising. And to this very day some Tracts are every where infested with flames and fires breaking forth from their under-ground storehouses; the violence and rage whereof, both *Columbus* and *Vespuccius*, at their great peril had experience of. The *Terzera*'s can scarce be inhabited for the vehemency of fires. The *Canary Islands*, and in them the *Pico*, or *Pike*, a Mountain of immense Altitude, equal to *Tenariff*, belches forth flames to this very day; as also the Plains of the circumjacent Islands stuffed with brimstone and sulphurous-unctuous matter. The Islands of St. *Helen*, and of the Ascention, to have flam'd heretofore, both the burnt Rocks of Mountains, and the Cinders, and plenty of Mineral and Stone-coals burnt and chark'd as it were, do sufficiently shew.

Yet no part of the world more famous than *America*, which you may call Vulcan's Kingdom. In the *Andes* alone, which they call the *Cordilleras*, from a Concatenation of Mountains, in the Kingdom of *Chile*, are fifteen Vulcano's. To these you may adjoyn the Vulcano's out of the Southern part of the *Magellanick Sea*, commonly call'd *Terra del Fuego*. In *Peru* not fewer then in *Chile*; six of inaccessible height; and three in the continued tops of the *Andes*, besides innumerable Vulcanian Ditches, Pits, and Lakes. In *Carappa*, a Province of *Popayan*, is a Mountain raging with smoke and flames, chiefly in serene weather. The City *Paraquipa*, ninety leagues distane from *Lima*, has a Mountain near it, casting forth continually such sulphurous fires, that the People are greatly afraid, lest sometime at length the Eruptions should utterly destroy the whole Region. At the valley of *Peru*, call'd *Mulahallo*, fifteen leagues distant from the City *Quito*, is another Vulcan, continually belching forth flames far and near, and threatning the People. *Of America.*

In the Northern *America*, are observed five, partly in new *Spain*, *viz.* Three, formidable for their belching flames, partly in new *Granada*, partly in the very heart and midst of *California*, and the more in-land *Mexican* Kingdom. In *Nicaragua*, one; Another neer *Aquapulcus*; three neer the Continent of *California*; And in the (*American*) Mediterranean Sea two others; and innumerable others 'tis like, not yet discover'd, through all the *Terr-aqueous Globe*.

In *Europe* five chief ones are noted, *viz.* *Ætna* in *Scicily*, by the Monuments of all Writers, whether Poets or Historians most famous. *The Vulcan's of Europe.*

Strongylus,

Strongylus, (and some other of the *Liparitan* Islands, not very remote from *Scicily*; especially that notorious by the name of *Vulcano*, to which is adjoyn'd another call'd *Vulcanello*) said all to have burnt heretofore, call'd the Vulcano's, or Vulcanian Islands. The Mountain *Hecla* in *Izland*, in the furtheſt North; and *Chimæra* in *Greece*: beſides many others in each particular Country; at leaſt Fire-wells, Pits, and Orifices, &c. Among all which *Italy* throughout all Ages is the moſt notorious for ſuch underground Harths and Æſtuaries; of which more particularly by its ſelf. And indeed *Italy* is moſt fitly ſeated of all Countries of *Europe* for ſuch vaſt Combuſtions, and Eruptions of fire.

Italy abounds with ſubterraneous fires.

Of Germany, *&c.*

Neither are *Germany*, *France*, *Spain*, and other Countries, wholly diſtitute of theirs; where, though there be none anſwerable to the other, yet both the frequent ſulphureous Craters, and deep burning Ditches and Pits, vomitting forth ſmoke and flames; and alſo the innumerable multiude of hot Baths and Wells every where, do betray ſome ſtore and work-houſes of ſubterraneous fire, creeping between their Conſervatories and Abyſſes of water. In *Miſnia*, in *Germany*, the Mountain *Carbo*, ever and anon rages with ſume and fire, &c.

Towards the Northern Pole

Neither are the furtheſt Tracts of the North too cold and frozen for them. Four whereof Authors reckon in the Region of the *Tyrſei* in *Tartary*. In *Lapland* high Mountains are obſerv'd to belch forth flames like *Ætna*. In *Izland*, the famous *Hecla*. And leſt Nature might ſeem to have left the furtheſt Regions of the North curs'd with the Everlaſting inclemency of Cold and Ice, it has conſtituted an huge Vulcanian Mountain, in the Iſland call'd *Groenland*, next to the Pole; And others in the Neighbouring, whether Iſlands, or Continents, ſcituated about the Pole, which they continue, even unto the Creeks and Bayes of the *Southern Land* call'd *Del Fuego*: So that many think that the Tracts of the Northern Pole inacceſſible by reaſon of the multitude of theſe fire-ſpewing Mountains.

CHAP.

CHAP. III.

Of the Vulcano's of Italy, Scicily, *and Neighbouring Islands.*

Italy abounds with Subterraneous Fires.

Italy, and the adjacent Island, have in all times afforded prodigious Heats, Combustions, Æstuaries, hot Baths, Conflagrations, and Eruptions of burning flames, and all the mighty Arguments, and wondrous Products and effects of Subterraneous fires. In so much that we want not History to report to us, That heretofore it all burnt from *Cuma* and *Vesuvius* in *Campania*, or *Terra di Lavoro*, even to *Histria*, not far from *Venice*; and therefore to have been called by the most ancient Inhabitants thereof, *The burnt Country*. And indeed *Italy* is every way disposed for such vast Combustions; As, with straitness and narrowness of scituation, whereby it is continually dash'd and struck with the beating of waters and waves between two Seas; with subterraneous passages and cavernous hollow windings and turnings, easily penetrable and passable to fires and winds. And lastly, with plenty of sulphureous materials, wherewith the whole luxuriously abounds. In so much that it burns, in certain places, above ground on the surface of the Earth. For in all the Southern parts of *Italy*, from the utmost Coasts of *Sicily*, to the very Confines of *Tuscany*; in some places, are seen perpetual burnings, as in *Ætna*. In other, Conflagrations by times, as in the Vulcanello's, or Liparitan Islands; and over against *Naples*, as in *Ischia*, *Prochyta*, *Pythacusa*; and also in the Mountains of the Continent, *Vesuvius*, *Misenum*, the *Puteoli*, and *Cuma*, which often burn, and in certain places, shew great Æstuaries, with abounding fires, fumes, vapours, baths; winding labyrinths, also every where obvious; as *Kircher* with greatest diligence observed; and gapes with burrow'd breathing-holes, which when they send forth a blast, presently, not without terrour of standers-by, are perceived more inward crackings, as it were, of burning and blazing fires, and sounds of waters; as in the *Phlegraan* Hills, which surround the Vulcanian Plains, commonly called *Sulphatara* (or Land of Sulphur) is to be seen and heard. Also the Sybell's Den at *Cuma*, not far distant; and most mighty horrid Gapings and Recesses, impenetrable,

The Phlegraan Plains.

and not to be entred, for their raging heat, give further assurances.

All Campania obnoxious to Fires.

All *Campania*, every where on it's Plains, carries ancient foot-steps of the same Conflagrations. The ground every where parch'd like Cinders, and Pumis-stones; and a dust, which they call the *Puteolan*, like Pouder; And extinct Coals included in living Rocks.

Campagna di Roma springs with Sulphur.

From *Puteoli* pass to *Campagna di Roma*, which is full of sulphurous Crater's, through the *Minturnian Marshes* to *Sulmo*; whence a continued Mine of Sulphur, through the Roman Plain exerts it self, in divers places, but chiefly, in a certain Lake of unsearchable profundity, four miles distant from the City *Tivoli*, as also the most famous of the sixteen swimming Islands thereabouts, which they call the *Barchette* (or little Barks.) Out of which, the sulphureous *River of Tyber* has its origine; and seems to have been famous heretofore, for hot Bath's. Hence a burrow of subterraneous fire, bends back to the Round Mountain; And thence into divers branches. One part whereof tends to the *Stiglian* Bath's, and the Lake in the middle Wood, horrible with stench of Brimstone, and for the spectacle of Waters boyling and bubling up in the form of a Column; and at length through the neighbour Mountains, where are also hidden pits of Serpents, full of Æstuaries, and smoking Funnels, or Chimneys; and even to the very hundred Cells: All which places, lavish with sulphurous Bitumen and unctuous materials; and so terminate in the Sea. The other branch, towards the Mountain *Rosea*, between which and *Roncilion*, new sulphurean Fire-Cups break forth, which have their occult communications with the Mountain *Viterbo*, and with the Village *Vico*; and are famous for sulphurean boyling Springs. And indeed the Mountain *Viterbo* seems yet to cherish a great force of fire under most profound Dens; which it diffuses at its Roots, on the Northern-side, towards *Viterbium*, into all the Plain, which is full of a most sulphureous *Gas*; The Glebes every where parch'd, and covered with Pumice-stones, and has innumerable hot Fountains; among which *Bullicamum* is most famous for its intollerable fervour. This hath a great commerce with another neighbour Lake, between *Viterbium*, and the Mountain *Flasco*, where Water breaking forth from the bottom of the Lake, does mightily tumultuate; And, which is wonderful to relate, here are beheld two Fountains together, distant scarce one pace, whereof one dances and leaps with most hot and boyling, the other with most cold and freezing water. Hence a burrow of subterraneous fire through whole *Tuscany*, diffusing it self into

The swimming Islands of Vivo

Burrows of Subterraneous Fire, dispersed into various branches.

Two near Fountains one most hot, the other most cold.

into innumerable branches, scarce leaves any place free, from sulphureous Cups, and Mineral waters. Sith *Tuscany*, on that side looking towards the *Tuscan* Sea, even to the Island *Ilva*, the whole Country every where, bubbles with hot waters, or luxuriously abounds with sulphureous Mines of Iron, or Brass; under which are indeed memorable, the stinking Ditches and Pools of *Volterra*, stuffed with servid and bubling Waters; And the Mines of the best Sulphur at *Castro*.

On the other part towards the East, a Burrow of Fire, extended far and wide, chiefly exerts it self, under the Mountain, called *Vivo*, where it causes the famous Baths of St. *Cassian*, and St. *Philip*; and hence stretches it self towards those called the *Avignion* Baths, even to the Mountain *Politiano*; where a plentiful quantity of Mineral Waters, with the grievousest stench, bubbles up. And hence on one side, even to the *Apennine*, which is also repleniss'd with Æstuaries (or raging Gulphs;) on the other; to *Siena*, in *Tuscany*, and the neighboring parts adjoyning to the Sea; And even to the Confines of *Genoa*, and the fields of *Luca*, which abound with so many Metals, so many sulphurous Wells and Fountains of hot and servid Water, as perhaps all *Italy* hath not the like. Yet most of all the Breathing-holes of subterraneous fire, burst out in the *Apennine* Hills, at *Petra Mala*, and neighbouring places, where the Air sparkles and glitters by night, and 'tis thick with darkness and smoak for a long time; as it were from some flaming furnace underneath; and heats the waters that are cast in, and burns stubble. Now this Fountain seems to have continual veins, even to the *Porretan* waters in the *Bononion* fields; Hills whereof, every where, sparkle and lighten by night. And hence seems to be poured into the fields of *Modena*, where liquor of Bitumen, and Sulphur, and Fire rages, after a wonderful manner; And hence continues the burnings of its fuel, even to *Histria*, of the *Venetians*. For that these Mountains of *Padua*, as ancient Historians testifie, did heretofore burn about the Baths of *Albano*, in the *Paduan* fields, both the bubling Tracts of Hills and Ashes, and the external surface of Pumice-stones; as also burnt and cindred Coals, and the fervor of stones, which make the very waters, running between, hot, do sufficiently shew.

Breathing Orifices of Subterraneous Fire at Petra Mala.

Which things seeing they are so, it may be truly, a certain Argument to us, that all *Italy* universally is stor'd with continual matter of Sulphur; a Burrow of which, as it does any where, more or

leſs, far and wide ſtretch forth its branches; ſo it extends them under the Sea alſo, to adjacent Iſlands, and according to the ſingular and peculiar temper of mixture, and the virtue of the heat, which it has under a different Tract of Veins, produces various effects, and cauſes marvellous burnings, and Eruptions, at certain times.

Italy heretofore in great part burnt.

We conclude therefore, ſaith *Kircher*, That *Italy*, the Nurſe of Burnings and Combuſtions, as it is all over ſtufled with ſubterraneous fires; which burn, in ſome places perpetually, in others by fits; ſo heretofore it had ſo great increaſes of Sulphur, ſuch a coacervation and vaſt treaſury of fires, that if it ſuffered not a total conflagration; yet at leaſt to have burnt in a very great part, as *Beroſus* witneſſes. Nor is it leſs credible, according to theſe principles, of nature, ſtanding, that even again and again, it ſhall burn with vaſt Conflagrations, till the very final Deſtruction and Conſumation of the whole Univerſe.

Underground. Commerce of Fires, between Italy, Sicily, &c.

Laſtly, Thoſe of *Ætna* in *Sicily*, and *Strongylus*, Vulcano, &c. of the *Lipparitan* Iſlands; have no doubt their Submarine and Subterrane Communications with the *Italian*, *Veſuvian*, *&c.* alſo. The Soyl of *Sicily* ſprings with often and eternal fires; and the whole Iſland cavernous, producing Sulphur and Bitumen abundantly; whereby exceeding fertile, of old, and even to this very day.

CHAP. IV.

Of the Remarkables of Vulcano's, and their moſt prodigious Phænomena's, hitherto obſerv'd, in particular; With particular Relations, &c.

Of Aſia, and the Eaſtern Iſlands, &c.

THus all the World over are found Eruptions of Fire by Natures own kindling, as if ſhe kept Houſe under-ground, and made ſeveral Hills her ignivomous and evacuating Chimneys.

In *Ormuzio*, an Iſland of the *Perſian* Gulph, all things are full of fires, whence 'tis ſaid to have burnt ſeven whole years continually. It yet belches forth daily, out of the Saline Mountains, which it abounds with, globes of flames, whereby the moſt famous Mart of the whole Eaſt, is almoſt quite laid waſt.

In *Media*, *Suſis*, at the white Tower, breaks forth with fire, out of fifteen Chymney-holes, with ſuch a vehement noiſe and ſound, that

that the People round about are perſwaded the Gates of Hell to be there.

In *Japon*, above other Iſlands, *Vulcan* ſeems to have forg'd a number of his Shops and Work-houſes, vomiting forth fire and ſmoak, night and day. And as it is ſeventy miles diſtant from the famous City *Firandus*; ſo by night they illuminate the whole Region, like ſo many blazing Torches, to the admiration of Beholders.

In the Iſland *Java*, the Mountain not far from the City *Panacura*, having not burnt for many years; (for ſome places burn alwayes, ſome by fits;) In the year 1586, raged with ſuch a violent Eruption, that ten thouſand perſons are ſaid to have periſhed, in the ſubjacent fields: and three whole dayes, darting forth mighty ſtones into the ſaid City, with fumes cauſed ſuch a darkneſs, as hid the Sun, and turned day into night.

The Mountain *Pico* in the Iſland *Timor*, of ſuch an height, *that a flamy Spire or Pyramid was ſeen for three hundred miles in the Sea.* This in the year 1638, had its very foundations ſhaken, by an horrible Earthquake; *and was wholly ſwallow'd up, together with the Iſland, leaving nothing behind it, but an huge mighty Lake.* So the Annals of the Jeſuites Society relate.

The Mountain *Gounapi*, in one of the *Bandan* Iſlands, in the year 1586, after continual burnings of ſeventeen years, at length burſt aſunder, ſent forth ſuch a quantity of ſtones, cinders, aſhes, and ſulphureous-Bituminous Pumice-ſtones, that the Sea almoſt cover'd therewith, all ſeem'd to burn, with the deſtruction of all *Fiſh*, and living Creatures.

In the Iſland *Ternat*, one of the *Malacca's*, there is an high and ſteep Mountain climbing up into the Clouds, whoſe lower parts are beſet with thick Woods and Forreſts, and upper parts peel'd and made bare with continual burnings. On the very top it hath *a Cup or deep Mouth, with a vaſt gaping, made round into many circles, from greater to leſſer, like an Amphitheater, or ſtage, one below another.* This, at the time of the Æquinoctials, chiefly by the blaſt of the Northern winds, raging with ſmoak and flames, reduces all the neighbour places round about, overwhelm'd with aſhes and cinders, into deſolation.

The *Mauritan* Iſlands ſeem wholly to burn, whence frequent Earthquakes; and caſts forth out of Caverns, and the very top of the Mountain *Thola*, ſuch quantity of flames, aſhes, and ſtones, as big as great Trees, that it ſeems a kind of Hell.

The

Of Africa, &c. The *Atlantick* Sea, west of *Africa*, so abounds with subterraneous Fires, that *Plato's* Land, call'd *Atlantis*, seems to have perish'd from no other cause, but as swallow'd up with the fierceness of these Fires; and the frequency of Earthquakes following thereupon. And to this very day certain Tracts of Seas are abundantly infested with flames and fires, issuing out of their store-houses; whose rage both *Columbus* and *Vespuccius*, to their great hazard, try'd.

Neer *Hesperius*, a Mountain in *Ethiopia*, the fields in the night all glitter with Light. As also a certain piece of ground does the like in *Babylonia*; and some places in *Italy* were noted before, for some such like thing.

Pliny, after reckoning up of the most notorious, concludes with the burning of the high and vast Mountain *Theonochema*, or *Chariot of the Godds*, in *Africa*, as the most famous example of this kind above all others; at least in those dayes. And ends, saying, *In so many places, with so many fires, does Universal Nature burn and roast the Earth.* And this great Naturalist, who perish'd, in prying too curiously into these dangerous prodigies of Nature, considering how full fraught the World is with this Element, and how propagative it is of it self, sayes, It is the greatest Miracle that an universal Conflagration of the World has not happen'd already, *Truly it exceeds all Miracles, that there has been any day, wherein all things have not burnt.* Those be his words.

Of America, &c. Some of the Vulcano's in the *Andes*, in the Kingdom of *Chile*, were so big-belly'd, as it were, with fire, that in the year 1645, they brought forth so great Calamities, to that Kingdom; that no Pen is able to express, whole Cities every where being both swallow'd up, and overturn'd.

The City *Paraquipa*, ninety Leagues distant from *Lima*, has a neighbouring Vulcanian Mountain, continually darting forth fires, in so much that the People are sorely afraid, lest sometime it should burst asunder, and destroy the whole Countrey.

The Vulcano's of *Guatimalla*, are more terrible. In the year, 1586, almost all the City of *Guatimalla*, fell with an Earthquake. This Vulcano had then, for six months together, day and night, cast from the top, and vomited, as it were, great flouds of Fire. As is also observeable of the Vulcano of *Quito*, which cast such abundance of ashes, that in many Leagues compass thereabouts, it darkned the light of day.

In *Nicaragua*, in North *America*, thirty five Leagues from the City

City *Leon*, an high Mountain vomits forth flames in such abundance, as to be seen for ten miles distance, and more. And another not far from *Aquapulcus* of the same fierceness.

Of these Vulcano's, some vomit out of their mouths smoke and ashes, or both: some fires, and there are some which never cast, either smoke, flames, or ashes; but in the bottom are seen to burn with a quick fire never dying. This impos'd upon a greedy Priest, and made him think it was nothing else, but heaps of Gold, melted in the fire, *which he thought to have fetch'd up by letting down an Iron Kettle with Chains*; But his device was not fire-proof, *his Kettle and Chain melting so soon as they approach'd neer the bottom.*

But the greatest wonder of all is that some of these Vulcano's have for some hundreds, nay for some thousands of years, cast out continually smoke, fire, and ashes.

For the *European*, to begin with the more Northern. And here first, who knows not the notorious Mountain *Hecla*, (and also *Hegla* and of the *Holy Cross*) in *Izland*, by the Relation of all Geographers, most remarkable, for mighty burnings. Mountains so terrible for Thunder, flamings out of fire, casting abroad stones, ashes, stink, and smoke; that the more fanciful conceit, that Hell is begun there aforehand: which were more plausible, if the Apparitions that are seen there, were as true, as they are said to be frequent. And which seems a Miracle of Nature, its highest *Top or Pike, is white, with perpetual Snow; and its Roots and sides blazing with unquenchable burnings.* And the multitude of hidden Gulphs and Whirl-pits suffer none to come neer, for many furlongs. And by the Eructuation of stones, and ashes, reduces all the circumjacent Plain into barrenness; together with a formidable noise, and crackling. Which while the Inhabitants hear, they superstitiously believe, the Souls of the wicked, to be tormented there, with a miserable howling. *Of Europe, &c.*

And even in *Groenland*, perpetually frozen with extreamest cold, next to the very North Pole, there is an huge Vulcanian Mountain, at whose Roots, is a *Monastery of the Order of Preachers*, call'd St. *Thomas's*, built of Tophas-stone, from the casting out of the Mountains. Concerning which, *Bartholomew Zenet*, a *Venetian*, a diligent Inspector and Searcher into these things, I know not by what accident cast on these Coasts, relates many wonderful things. *Here*, sayes he, *is seen St.* Thomas's Monastery of the Dominicans. *And not far distant an Ignivomous Mountain; at the foot whereof, a fiery Fountain breaks forth; With the Water of this Fountain, derived by Pipes,* *The Wonders of St. Thomas Monastery in Groenland, &c.*

Pipes, not only all the Cells of the Moncks are made hot, like Stoves; but also their Meat dreſſed; yea, and their very Bread bak'd. The Mountain vomits forth the Tophaz or Pumice-ſtone, which the whole Monaſtery is built of. For thoſe Tophaz's ſoaked through with that hot Water, are cemented together, as it were, with clammy Bitumen. Here are alſo moſt pleaſant Gardens, watered with boyling Water, in which are Flowers and Fruits of all kinds. And this Water, when it hath run through the Gardens, falls into a neighbour Gulph, or Port; whereby it happens, that it never is frozen; and therefore the Fiſh, and innumerable Birds and Fowl frequent there; wherewith the Inhabitants live in full plenty. So he writes, who ſaw and diſcovered the Coaſt, *the King of* Danes *chief Admiral*, Nicholas Zenet, a *Venetian*.

Now it is moſt likely that the Vulcan's of *Izland*, and *Groenland*, have communication together, by hidden Burrows and Channels; and are perpetually imploy'd by ſecret Æſtuaries, to allay the vehemency of the Cold, and abundance of Ice. Whence alſo is drawn the Reaſon, why in ſome Northern Iſlands, and the Shores of *Norway*, *Finmark*, *Biarmia*, *Lapland*, in one part the Sea is eaſily frozen with Ice; in another part, not at all, by no force of cold, or ſnows. Alſo in ſome ſhores moſt abundant Paſtures, together with Trees, and moſt fruitful fields are found: In others, as in *Nova Zemblia*, neither Graſs, nor Trees, nor any thing profitable for the nutriment of Man, to be met with.

There was alſo ſome Vulcanian Hill, Crater, or Pit, which burnt for ſixteen years in *Scotland*, and conſum'd a large quantity of ground. Even as now ſome Coal-Mines about *Newcaſtle* are ſaid to have continued burning for ſeveral years of late, and 'tis likely do ſo ſtill.

In *Germany*, was violent Eruptions formerly. Who in theſe latter Ages, hath ever heard, or read of ſuch a Fire, iſſuing out of the Earth, as *Tacitus* deſcribes? which burnt a whole Territory; againſt which Water was unavaileable; which could never be extinguiſh'd, but with Stones, Cloaths, Linnen, and Wollen, and other dry Materials caſt thereon. *Tacitus* words run thus.

The City of the *Inhonians* in *Germany*, confederate with us (ſaith he) was afflicted with a ſudden diſaſter. For fires iſſuing out of the Earth, burned Towns, Fields, Villages every where, and ſpread even to the Walls of a Colony newly built; and could not be extinguiſhed, neither by Rain, nor River-water, nor any other liquor

that

that could be employed, until for want of remedy, and anger of such a distraction, certain Peasants cast stones afar off into it; then the flame somewhat slacking, drawing near, they put it out with blows of Clubs and otherwise, as if it had been a wild beast. Last of all, they threw in cloaths from their backs, which the more worn, and fouler, the better they quenched the fires. We have omitted the high Mountains in *Lapland* also, which *Olaus* relates, belch forth hideous flames, like *Ætna's*.

In *Greece* the Mountain *Nymphæus* flings out fire also, and pitchy bituminous matter; the fury whereof is enkindled by rain and water: As also the fire of those Ignivomous Mountains of *Lycia*, and *Pamphylia*, in *Asia minor*, (not mentioned before) *viz.* The monstrous Mountain *Chimæra* heretofore famous for often belching forth Fires. It's Fire is the more inkindled with Water, but quenched with Earth, or Hay. As also the *Hephæstian* Mountains, near *Chimæra*; whose Earth, touched with a lighted Torch or Brand, suddenly takes fire; so that the stones burn in the very waters, and the fire is fed and nourished by Rains, and Waters. And if with a kindled, or burning brand, furrows be made in the Earth; Streams or Rivers, as it were, of Fire, will run along after: As *Pliny* writes.

In the *Mediterranean*, in the *Archipelago*, the *Island Santorin*, has had formidable Fires and Earthquakes, as in the year 1650, from the relation of Fa. *Fr. Riccard* of the Jesuits society, who was present, and an eye witness; and with his own mouth related the whole event, to *Kircher*, at *Rome*, afterwards; and by the following Testimony, would have it known to posterity.

The Relation of Fa. Fr. Riccard, *concerning Subterraneous Fires, which brake forth from the bottom of the Sea, in the year* 1650. *near the Island* Santorin, *in the* Archipelago.

"ALthough some reprove *Pliny* of lyes, in that he relates certain "stupendous things, above humane capacity: yet daily ex- "perience teaches us, that in many things he spake true; chiefly "in the History of many Islands, which in succession of time arose "and started up from the bottom of the Sea; and amongst others "*Thera*, in the 135. Olympiad, (which was about the year of the "world 3200.) It was also call'd *Calista*, and *Phylosthera*; But now

"*Santorin*, from *St. Irene*, the famous Virgin and Martyr, wor-
"shipped there. For *Baronius* himself, in his Eccleſiaſtick Annals of
"the year 726. ſeems to give credit to *Pliny*. For thus he ſpeaks. A
"vapor was ſeen to bubble forth out of a Chimny of Fire, between
"the Iſlands *Thera* and *Therafia*, (or *Santorin*) from the very bot-
"tom of the Sea, for ſome dayes; whereby the burning of the fiery
"heat, by little and little being condenſed, and dilated or ſpread,
"it all ſhewed like a fiery flaming ſmoak. Moreover, with the
"vaſtneſs of its earthy ſubſtance, it conveyed hugeous Rocky-Pu-
"mice-ſtones, and certain great heaps, through all *Aſia*, and *Lesbos*,
"and *Abydus*, and the Maretime Coaſts of *Macedonia*; ſo that the
"whole ſurface of the Sea was filled with theſe Pumices. But in the
"middle of ſo great a Fire, there was an Iſland made, from the
"heaping and congeſtion of Earth together, and joyn'd to the
"Iſland called *the Sacred*, which never exiſted before. The like we
"underſtood happened in the year 1457, from certain Verſes in-
"graved on Marble, for the perpetual Memory of the thing: which
"near the Gate of the Caſtle *Scarus* of the ſaid Iſland, run to this
"purpoſe.

Viz. 1547.

Magnanimous Francis, *the Heroes undoubted Off-ſpring,*
Thou ſeeſt with thine eyes, what Calamities & Wonders;
By joyning five times eleven unto two;
on the ſeventh of the Calends of December,
With a vaſt murmur, vaſt Teraſia groan'd,
And pluck'd aſſunder mighty Camena's *ſtones;*
From the Sea's bottom, an huge Rock appears,
A Monſter great, and moſt Memorable for ever.

"Further it appears, that there was another Iſland next to this,
"form'd in the year 1570. not without great Terror of thoſe of
"*Santorin*. Sith the Burning laſted for a year, as ſome ancient folk,
"who ſaw it with their Eyes, do yet teſtifie. But in the middle of
"this ſmaller Iſland, which is now called *Little Camena*, to this very
"day is beheld an huge and profound ditch, which being narrow
"towards the bottom, by little and little inlarges it ſelf round, like a
"funnel; out of which, as out of a Chimney, burſted forth thoſe
"mighty Stones and Rocks, which co-mixed with the Cinders and
"Aſhes, built that Bulk or heap, appearing aloft.

"But that thoſe Subterraneous Fires, which are fed with plenty
"of Bitumen and Sulphur, and ſometimes break forth with greateſt
violence

" violence, are never extinct, is evident, from most hot Waters, which " are found at the Sea-shoar, in the furthest South part of the Island, " and which the Inhabitants use, as the most healthfullest Baths, to " expel diseases sprung from Cold.

" But if ever those Fires, pent up in the bowels of the Earth, ex- " ercised their force, it was most of all then, when in the year 1650 " on the 24th of *September*, even to the ninth of *October*, they shook " that Island with so mighty and so frequent Earthquakes; that " the people, *viz.* of *Santorin*, fearing nothing but immediate ruin, " were on their knees night and day before the Altars. But it can- " not be spoke nor expressed what a fear invaded all; when those " victorious flames, breaking open all obstacles, strove to make them- " selves a way through the midst of the Waters of the Ocean, about " four miles from *Santorin* Eastward: For that forsooth *the Sea*, " *swell'd thirty cubits upwards, suddenly; and extending it self wide,* " *through the Neighbouring Lands, overturn'd every thing it met in* " *its way; In so much that the very Port of* Candy, *which yet is* 80 " *miles distant, it broke in pieces, with its sudden assault, and impetu-* " *ousness, both the Gallies and Ships.* But the Air, infected with those " ill-smelling and Sulphureous vapours, began to be darkened, and " put on innumerable forms and appearances. Hence brandishing " of fiery Lances and flammivomous Swords; thence darting forth " bright and glittering Arrows. Here, as it were, terrible Serpents " and Dragons flying; and there hideous Thunder-claps, Lighten- " ings, and Thunder-bolts, were stirred up.

" And yet we could scarce see: for the eyes of all beholders were " so hurt, with those sharp pricking and Sulphureous Smoaks and " Vapours, that almost all became blind for three dayes; so as not " only to see nothing, but were also seiz'd with so great and so " grievous a pain, that they wept continually, and bewail'd their " most miserable lot. But when they return'd to their free eyesight, " they saw all their Silver and Golden, both Vessels and Garments, " and all Pictures, drawn over with a yellow colour. And such " a great multitude of Pumice-stones that fiery Gulph vomitted " forth, that it covered the whole surface of the Sea, so that scarce " any one could pass in a Vessel. It is most certain, that they were " convey'd even to *Smyrna*, and *Constantinople*; and all Shoars and " Coasts filled therewith. Now the force of this burning was greatest " the two first months: Forasmuch as the Neighbour-Sea seem'd " even to bubble like a boyling Pot; And night and day huge

"Globes and flakes of Flames, and moſt thick heaps of furled pitchy Smoak mounted up.

"Which if at any time, by an adverſe wind, were carried to the "next places, brought, beſides a moſt grievous ſtink, deſtruction "both to Birds, Beaſts, yea and to very Men themſelves. As it hap"pened the ninth of *October*, and fourth of *November*, that fifty "Husbandmen choak'd with the ſmoak and ſtench, moſt miſerably "periſh'd; beſides an innumerable multitude of Birds, Sheep, Oxen "and Aſſes. The ſame happened to nine Mariners, who paſſing by "night that way, in their Veſſel, after three dayes, were found all "half burnt, and were buryed in the Iſland *Nio*, ſixty miles diſtant "from *Santorine*.

But the other four Months, although that Heſſiſh Hearth or Furnace, remitted much of its vigor and fierce heat, and could ſcarce lift it ſelf above the waves: yet nevertheleſs it ſeem'd both to caſt out Pumice-ſtones, and even to labour and ſtrive towards the formation of a New Iſland: which although it does not yet appear above Water, yet in a calm Sea, a ſhallow Ford is obſerv'd, which the Water ſwims over, ſcarce eight cubits high. But now if it be ask'd, Whether yet theſe Fires are quite allayed? 'Tis anſwered, That they ſeem ſometimes to revive: Sith 'tis diligently obſerv'd, that the Sea boyls and rages there very often, and ſends up ſmoak with the waves; And eſpecially this year 1656, the 11th day of *June*, and three dayes following.

Even the Geographick Dictionaries alſo record, that both this *Santorine*, and the other little Iſland by, to have aroſe out of the Sea of late years; the one an hundred years ſince, and the other fifty. And that the Sea is exceeding deep thereabouts; and huge and fearfull Noiſes to be there heard.

Italy, *Sicily*, together with the neighbouring Iſlands of the *Mediterranean*, correſponding with them, &c. are moſt notorious; But of them, and their Remarkables, and particular Relations by themſelves, in the next Chapter.

In the Atlantick Ocean, Weſtward; the *Azores* or *Tercera's*, can ſcarce be inhabited for the vehemency of Fires, and Earthquakes together therewith; Which about twenty years ſince, ſo ſhook the univerſal Iſland of *St. Michael*, and made ſo great ravagings, that it almoſt wholly ſunk in an Abyſſe or bottomleſs Gulph.

"For on *June* the 26th, in the year 1638, formidable Earth"quakes began to make the univerſal Iſland ſhake and quake, for the

" the ſpace of eight dayes; ſo that the Cities, Towns and Caſtles " being deſerted, Men were forc'd to dwell in the open Fields; " chiefly thoſe of *Vargen*, where the Earthquakes raged more dan- " gerouſly than in other places. After which Earthquakes, ſucceeded " the following Prodigy. Six miles diſtant from the Pick (commonly " called *the Pick of Camerine*) is a place called *Ferreira*, where Fiſher- " men with their Boats were wont to fiſh, eſpecially in the Sum- " mer-time. For there in a dayes time, they caught ſuch a multi- " tude of Fiſh of all kinds, as no Boat returned laden with leſs than " ten thouſand Fiſh. In this tract therefore of the Ocean, on Satur- " day in the month of *July*, in the year 1638, Fire broke forth with " ſuch an unexpreſſible violence, notwithſtanding the depth of the " ſaid place of the Ocean, found often heretofore by the Fiſhers to " be an 120 foot deep; that indeed the very Ocean would not ſuf- " fice to extinguiſh ſo great a burning. The ſpace which the boyl- " ing fire took up, was as great as would ſerve for the ſowing of two " Buſhels of Wheat; breaking forth with ſo great violence, that " notwithſtanding the ſaid profundity of the Ocean, it reach'd as " high as the Clouds; being elevated into the ſupream Region of the " Air; carrying with it the very Water, Sand, Earth, Stones, and " other mighty heaps, juſt like Featherbeds flying up into the Air. " Which afar off appear'd a ſad ſpectacle to Beholders; But the " melted matter returning down into the Sea again, reſembled a " kind of Pultis or *Frumenty*. Moreover, it is to be aſcribed to the " benignity of the Divine Providence, that at that time the Wind " was terreſtrial, ruſhing forth from the parts of the Iſland, againſt " the rage of the outragious Fire; without which, the whole Iſland " had without doubt been burnt, and periſhed with this formidable " combuſtion. Then preſently after it caſt forth ſtones of ſuch vaſt " bigneſs, of the height of three Lances, or piked Staves; that you " would ſay, not Stones, but entire Mountains were caſt out. And " this was added to the horror; That the ſtony Mountains which " were caſt forth on high, falling back again, and meeting and daſh- " ing againſt others, thrown out aloft, at a good diſtance, out of " the bowels of the Sea, broke into a thouſand pieces with a terrible " noiſe and ratling; which afterwards being took up into your " hands, mouldred into a black Sand.

" Moreover, out of the various and vaſt multitude of rejected Of- " falls, and the collection and heaping together of innumerable " ſtones, a new Iſland aroſe, and that even in the midſt of the moſt

deep

"deep Ocean. In the beginning indeed, little, of five Acres only; "but daily encreasing, grew to such a bigness, that four dayes after "it took up the length of five miles. And so great a multitude of "Fish perished with this burning, as scarce eight Ships of Indian "Burden could contain; which being dispersed far and wide, up "and down the Island, lest they should cause some Contagion by "their putrifaction, they were collected together by the Inhabi- "tants all about, and buried in most deep-dugg ditches for eighteen "miles round about. But the scent of Sulphur was smelt for the "space of twenty four miles. This from the Relation of the *Fathers* of the Society.

These visible instances of particular Burnings of the Earth, are notable presumptions, that there are laid in the hidden Mines of Providence, such a provision of combustible matter, as will serve for an Universal Conflagration of the Earth, when the day of Vengeance shall make use of these Treasuries of Wrath.

We might add further Arguments of Subterraneous Fires, and the Fewel thereof; from Earthquakes, and hot Fountains; Of which there are some in *Peru*, as *Acosta* reports, that are so hot, that a Man cannot endure his hand so long, as the repeating of an *Ave-Marie*. There be infinite numbers of these in the Province of *Charchas*. He makes mention also, in the same place, of several Springs and Fountains that run with Pitch and Rosin. Which yet seems nothing so strange, as those Baths *Fallopius* speaks of, in the Territories of *Parma*, whose Water catches Fire at a distance; But these are something from our present design, and therefore pass them by.

CHAP. V.

Of the Remarkables of the Italian Vulcano's, and their prodigious Eruptions in particular; with particular Relations.

HOw *Italy* of all Lands, especially Continents, has been most notorious for Vulcanian Eruptions and Combustions, has already been observed. It remains therefore, now only to take notice of the most remarkable; which are those about *Putzol*, with the *Phlegraean* Plain; now called *Sulfatara*; and the *Vesuvian*; All within the Kingdom of *Naples*, (which has near communication and commerce

mierce with the *Ætnaan* in *Sicily*) namely in *Terra di Lavoro*; which Land was anciently called *Campania Fœlix*, from the wonderful fertility thereof. So exceeding fruitful in Wines and Whear, that it is called by *Florus*, the Land of Strife between *Bachus* & *Ceres*, and deservedly: For in this noble Region, one may see large and beautiful Fields, overshaded with rich Vines, thick and delightful Woods, sweet Fountains, and most wholsom Springs of running Waters, as well for health, as delight and pleasure; and in a word whatsoever a covetous mind can possibly aim at, or a carnal covetous. And yet all this *Campania*, as before was shew'd, is, or has been, obnoxious to Fires; and abounds with sulphureous and combustible Earth and Materials; which no doubt tend to its fructification. To begin with the Phlegræan fields. Concerning which,

Hear first, what Mr. *Sandys*, in his Travels, sayes.

Vulcan's Court described.

The Court of *Vulcan*, call'd the Phlegræan fields heretofore; for that *Hercules* here overthrew the Gyants, for their inhumanity and insolencies; assisted with Lightning from Heaven:

Th' Earth with imbowell'd Flames, yet fuming glows;
And Water with Fire, Sulphur mixt, upbroms.

Whereupon grew the Fable of their warring with the Godds. But hear we *Petronius* describing it:

A place deep sunk in yawning Cliffs, 'twixt great
Dicharchea *and* Parthenope, *repleat*
With black Cocytus *waves: For Winds that strain*
To rush forth there, a deadly heat contain.
Th' Earth fruits in Autumn bears not, nor glad Field
Once puts on Green; or sprouting branches yield
Their Vernal Songs. But Chaos and ragg'd Stone,
Smircht with black Pumice, there rejoyce, o'regrown
With mournful Cypress. Dis *his head here raises,*
Cover'd with Ashes pale, and Funeral blazes.

A naked Level it is, in form of an Oval, twelve hundred forty and six foot long, a thousand broad, and inviroued with high cliffie hills, that

that fume on each ſide, and have their Sulphurous ſavour tranſported by the Winds, to places far diſtant. You would think, and no doubt think truly, that the hungry Fire had made this Valley with continual feeding; which breaks out in a number of places. And ſtrange it ſeemeth to a ſtranger, that men dare walk up and down with ſo great a ſecurity: The Earth as hot, as ſufferable, being hollow underneath; where the Fire and Water make a horrible rumbling, conjoyning together, as if one were fuel to the other: here and there bubling up, as if in a Caldron over a Fornace; And ſprouting aloft into the Air, at ſuch time as the Sea is inraged with tempeſts. In ſome places; of the colour of Water, which is mingled with Soot; in others, as if with Lime, according to the complexion of the ſeveral Minerals. The flames do many times ſhift places, abandoning the old, and making new Eruptions, (the mouths of the vents invironed with yellow cinders) ariſing with ſo ſtrong a vapour, that Stones thrown in, are forthwith ejected. Yet for all theſe terrors, it is hourly trod upon both by men and horſes: and reſorted unto by the diſeaſed in *May*, *June* and *July*, who receive the fume at their mouths, ears, noſtrils, and ſuch other parts of their bodies, as are ill affected; which heateth, but hurteth not: that being only ſovereign that evaporateth from Brimſtone: It mollifieth the ſinews, ſharpneth the ſight, aſſwageth the pains of the head and ſtomach, makes the barren pregnant, cures violent feavers, itches, ulcers, *&c.* From *January* to *October*, the Husbandmen hereabout do ſtir their Glebe at ſuch time as much ſmoak doth ariſe, and that they know that it proceedeth from Sulphur: which doth add to the ſoyl a marvelous fertility. From hence they exact yearly three thouſand pounds weight. Another kind of Sulphur is gotten here, not taken from the *Fire*; but found in the Earth: of eſpecial uſe for the dying of Hair, and familiarly experimented by Women. White Salt-Armoniack is here found alſo. At the foot of this Mountain that regardeth the Eaſt, are Minerals of Allome, and the beſt of the World. In the top of the Mountain are certain little veins of a white matter like Salt; much uſed by Skinners: whereof a Water is made, that forthwith putteth out all characters that are written in Paper. The flower of Braſs is here found every where, excellent, and tranſparent; with white and red Niter. This place is ſaid by the Roman Catholicks to be diſquieted with Devils: and that the fire underneath, is a part of Purgatory, where departed ſouls have a temporal puniſhment. The *Fryers* that dwell hard by

by in the Monaſtery of *Saint Januarry*, report that they often do hear fearful ſhreeks and groanings. They tell alſo a late ſtory of a certain youth of *Apulia*, a Student in *Naples*; who deſperate in his fortunes, adviſed with the Devil, and was perſwaded by him to make him a Deed of Gift of himſelf, and to write it in his own Blood; in doing whereof he ſhould in ſhort time recover his loſſes. Believing the Deluder, according to appointment he came unto this place, with that execrable Writing: when affrighted with the multitudes of Devils that appear'd unto him, he fled to the aforeſaid Monaſtery, and aquainted the *Prior* with all that happened, He communicated it to the Biſhop, (now or late living) who informed the Pope thereof: by whoſe command he was caſt into Priſon, and after condemned to the Gallies. Poſſible it is that this may be true; but *Damianus* the reporter of that which followeth, (though a Cardinal) might have had the Whetſtone, if he had not alledged his Author: who telleth of a number of hideous Birds, which accuſtomed to ariſe from hence on a ſudden in the evening of the Sabbath; And to be ſeen until the dawning of the day, ſtalking on the tops of the hills, ſtretching out their wings, and pruning their feathers; never obſerv'd to feed, nor to be taken by the art of the Fowler: when upon the croaking of the Raven that chaſed them, they threw themſelves into theſe filthy waters: Said to be damned ſouls, tormented all the week long, and ſuffered to refreſh themſelves on the Sabbath, in honour of our Saviour's Reſurrection. This he reports from the mouth of the *Archbiſhop Umbertus*. But if this be Hell, what a deſperate end made that unhappy German, who not long ſince ſlipt into theſe Fornaces? or what had his poor Horſe committed that fell in with him, that he ſhould be damned; at leaſt retained in Purgatory? The matter that doth nouriſh theſe Subterranean Fires, is Sulphure and Bitumen. But there it is fed by the latter, where the flame doth mix with the water, which is not by water to be extinguiſhed: approved by the compoſition of thoſe *Ignes Admirabiles*, or Admirable Waters.

Nigh hereunto are the ruines of a magnificent Amphitheater, environing in an Oval, a Court, an hundred threeſcore and twelve feet long, and fourſcore and eight over: thrown down by an Earthquake not many ages ſince; which here happen not ſeldom, by the violence of enflamed and ſuppreſſed vapours. Dedicated it was to *Vulcan*; and not without cauſe, he ſeeming in theſe parts to have ſuch a Sovereignty. A latter relation and account we have of theſe

Plains by *Kercher*, which we will give you also; and is as follows.

A Description of the Phlegræan Plain, *in the Fields of* Putzol, *or* Puteoli, *near* Naples, *by* Athanas. Kircher, *his own Observation*, An. 1638.

In the Year 1638. passing by *Naples*, I could not let slip the opportunity of inquiring and looking into these sulphureous Plains, so much celebrated in all Ages: Which the Antients called the *Phlegræan Plains*. Having therefore got through a subterraneous passage, which they commonly call the *Grotte* (which we have elsewhere describ'd) Arched, and made hollow, or vaulted between the Mountain *Pausilippus*; not far from *Putzol*, between the Jaws of the Mountains, a Plain stretched forth far and wide, presents it self to view. A Plain altogether formidable and full of horror; in length they say 1200 foot, in breadth a 1000. *Pliny* writes, that they were called the *Phlegræan Plains*, from their flames and burning; (for so the word signifies.) But *Cornel. Strabo* calls it, *Vulcan's open Market-place* (publick Theater or Court.) For in manner of a huge Theater, as it were, it sends forth perpetual fires; and begets much Sulphur and combustible and inflamable matter, and therefore called *Sulfatara*. A place where also some fable the Giants to have been overcome by *Hercules*. Little Hills are beheld there to burn and flame in the very bottom; for they always exhale forth great smokes every where, with a sulphureous stench through many holes, which are carried by the Winds through all the neighbouring Regions, even unto *Naples* also. This whole Plain is surrounded with Hills, or high & steep Rocks; whereof the top or Pick, once very high, being at length devoured by perpetual fires, is concluded from the very form of the place, to have sunk into a most profound Vale. Therefore that which was once the top, is now a deep ditch, or hole, in a plain Vale. And what were the coasts or sides of the Mountain heretofore, are now the tops of Cliffs and Rocks. And these, heretofore indeed, as *Dion Cassius* witnesseth, vomited forth fires and flames in greater quantity. The neighbour Mountains also did continually burn, and cast forth thick fumes and fiery Waters, as it were, out of Furnaces. But now the very Plains, no otherwise then the *Phlegræan* Hills, being exhausted with perpetual flames, are cavernous, with an infinite number of holes, and are every where yel-

yellowiſh with a ſulphureous matter and colour. The ſoil alſo, when it is touch'd by ſuch as walk thereupon, ſounds and rattles like a Drum, as it were, by reaſon of the concavities; and you may feel, as it were, not without aſtoniſhment, boyling waters under your feet, and thick and fired fumes, to hiſs and flow hither and thither, with a great crackling noiſe, through Pipes and Subterraneous Caverns, made by the force of the hot Exhalations. VVhich force, how great it is, you may try, by ſtopping any hole, with a heavy ſtone, or ſo; for then you ſhall ſee the violent force of the ſmoke preſently to belch it forth again.

An horrible ſtinking Ditch and Pond.

Yet an huge Laky-ditch in the ſame Plain did wonderfully affect me: For it is found full of boyling waters, and ready to fright one with their blackneſs. You would ſay, it was a Kettle or Caldron boyling with Pitch and Roſin. VVhich forthwith changes place; and the waters growing hard on the brim of the Caldron, is made narrower or wider, as the force and impetuouſneſs of the Exhalation is greater or leſſer.

A marvellous force of jetting or darting forth Waters.

That alſo is wonderful; That that ſwallowing Gulph, caſts forth waters on high, eight or ten foot above a mans height, in the faſhion of a Pyramid, and thoſe fat and clayie, and almoſt of a ſulphureous colour. VVhich even the Inhabitants of *Putzol* do confeſs; who affirm, that theſe boyling waters are ſhot forth on high, to ſixteen, or even twenty four palm height ſometimes. And this eſpecially when the Sea rages; but not ſo likewiſe when it is calm. A moſt clear ſign certainly, that theſe marvellous effects of the exalted liquor, proceed from no where elſe, but from the Sea: For the Sea being toſſed with the ſtorms of winds, whilſt through ſubterraneous paſſages it ſollicites, as it were, the Steward or diſpenſer of this melted liquid matter; 'tis no wonder, that a Liquor, not knowing how to contain it ſelf in its own narrow bounds, ſhould be darted forth on high, beyond its limits, conſtituted thereunto by nature. By ſo much indeed the more violently, by how much the impetuous afflux of the Sea thruſts it forth with greater violence. Yea, and the divers colour of the waters at that time; compounded of the various mixture of the Sea-water, with the various mixture of the Mineral Juices; Namely, of thoſe waters, which, from the more profound boyling Springs of the Earth, the ſubterraneous winds, agitated by the ragings of the Sea, and growing ſtronger and ſtronger amidſt the flames, belch forth; does plainly teach. But the Sea being ſtill calm, none of theſe things are perceiv'd; but the waters are only beheld fat, or

oyly; and filthy with a black coaly ſoot, together with a certain effervency or boyling.

What ſhall I ſay of the Mountains and Rocks, with which this Vulcanian Plain is encompaſſed and guarded. There are beheld in theſe conveyances or paſſages, as it were, of Chimneys, not a few breathing-holes, ſome of which belch forth a perpetual wind, with a formidable ſound, and crackling noiſe; and with ſuch a force, that if you caſt a ſtone thereinto, it being ſtruck back preſently, you ſhall receive it caſt forth again with great force. Some darr forth ſmoak mixt with flames. You would think your ſelf almoſt in the midſt of Hell; where all things appear horrid, ſad and lamentable, with a moſt formidable face of things. Alſo you are almoſt ſtruck even breathleſs, with the ſtench of Sulphur, Bitumen, Napthe, and other Earths, Clayes, Marles, and Minerals. And yet although the place be ſo horrid; yet thoſe who labour in making of Sulphur, Niter, Vitriol, *&c.* reap much profit thereby.

Further; We muſt not omit here Mr. *Sandys*'s relation of a moſt memorable both Earthquake and Burning, which happened not far from theſe Plains, near unto the City *Putzol*, in the year 1538. with the new-formed Mountain. For the famous Lake *Lucrinus*, near *Putzol*, extended formerly (it ſeems indeed to have been joyn'd with it on one ſide) to the deadly ſulphureous Lake *Avernus*, ſuppos'd the entrance into Hell by ignorant Antiquity; where they offered infernal ſacrifice to *Pluto* and the *Manes*, there ſaid to give Anſwers; is now no other than a little ſedgy plaſh, choak'd up by the horrible and aſtoniſhing eruption of the new Mountain; whereof as oft as I think, I am eaſie to credit whatſoever is wonderful.

For who here knows not, or who elſewhere will believe, that a Mountain ſhould ariſe (partly out of a Lake, and partly out of the Sea) in one day and a night, unto ſuch an height, as to contend in altitude with the high Mountains adjoyning? In the year of our Lord 1538, on the 29th of *September*, when for certain dayes foregoing, the Country hereabout was ſo vexed with perpetual Earthquakes, as no one houſe was left ſo intire, as not to expect an immediate ruine; After that the Sea had retired two hundred paces from the ſhoar (leaving abundance of Fiſh, and Springs of freſh-water riſing in the bottom) this Mountain viſibly aſcended about the ſecond hour of the night, with an hideous roaring, horribly vomiting ſtones, and ſuch ſtore of cinders, as overwhelmed all the buildings hereabout, and the ſalubrious Baths of *Tripergula* for ſo many ages celebrated;

lebrated; consumed the Vines to Ashes, killing Bird and Beasts: The fearful inhabitants of *Putzol* flying through the dark with their wives and children, naked, defiled, crying out, and detesting their calamities. Manifold mischiefs had they suffered by the Barbarous, yet none like this which Nature inflicted. But hear we it describ'd by *Borgius*.

What gloomy fumes dayes glorious Eye obscure?
The pitchy Lake effus'd through Sulphury Caves,
Higher than Ætna's Fire, throws flaming waves:
Hath Phleg'ton *broke into* Avern; *with groans*
Whirling the horrid flouds, and rumbling stones?
The Baian *waves resound; fresh streams ascend;*
And several wayes their speedy currents bend.
Misenus *lets his Trumpet fall, scarce heard,*
Sick Prochyta *a second ruine fear'd.*
Loud roarings from Earths smoaking womb arise,
And fill with fearful groans the darkned Skies.
A sad sour face doth menace from the West;
Whence sharper plagues the Latian Towns infest.
Then furious Winds to Skies huge stones eject;
Which, like a Compass turn'd about, erect
A round Amphitheatral. Flouds of Stone,
From belching Gulf, in Millions straight forth thrown.

Nor can what they then suffered be ever forgotten, having such a testimony still in view as is this strange Mountain; advancing his top a mile above his basis. The stones hereof are so light and pory, that they will not sink when thrown into the water. The cause of this accident is ascribed unto the neighbourhood of the Sea and hollowness of the soil: whereby easily engendred exhallations, being hurried about with a most violent motion, do inflame that dry and bituminous matter; casting it upward, and making way for their fiery expirations. To those also is the retiring of the Sea to be attributed: who strugling to break forth, do ratifie and so raise the Earth, which thereby also as it were made thirsty, sucks the water through crannies into her spungy and hot intrails: increasing the vapours, not decreasing the fire; by reason of the Bitumen. Perhaps *Delos* and *Rhodes*, unseen in the first Ages, were made apparant by such means: however, divers of the Vulcanello's or Liperitan Islands were without peradventure; All of them having flam'd, and being

now

now more in number than observed by the Ancients. This new Mountain, when newly raised, had a number of issues, at some of them smoking, and sometimes flaming: at others disgorging rivolets of hot waters; keeping within a terrible rumbling: and many miserably perished, that ventured to descend into the hollowness above. But that hollow on the top, is at this present an Orchard; And the Mountain thorow-out is bereft of his terrors.

Of Vesuvius, *a Vulcanian Mountain, in the Kingdom of* Naples *likewise, now called* Monte di Somma.

The most noted Vulcano of the Mountain *Vesuvius*, is also in this happy Country of *Campania*, a little further remov'd from *Naples*; whose ragings and eruptions have been wonderfully remarkable in all Ages: And yet notwithstanding all its fires and burnings, its Hills are full of Vines and Olives; and all its Fields about, of wonderful fruitfulness; save only the Top alone, where it hath a great Plain bare, and bearing no manner of fruit at all. The face of the Earth like Cinders or Ashes, and old ruinated and wasted Rocks; undoubted signs of its ancient and often Burnings.

Vesuvius then is a Mountain of *Campania Felix*, about eight miles from *Naples*; which also hath received great injuries and prejudices by its Cinders and violent hurling forth of Stones, flung even to its Walls and Edifices. This Mountain has vast Fountains of *Fire*; And heretofore was on every side high, before the inward parts were consumed with fires. It utters usually smoak by day; but by night flames. Its manner is to send forth a loud sound or roaring noise, and bellowing first; and then to belch forth an huge force of Cinders, with the manifest danger of passers by. But if a more vehement Wind ply upon it, the Ashes or Cinders are rais'd so high, and drove so far in length, that 'tis certain, they have sometimes been carried, as *Procopius* testifies, even as far as *Constantinople* it self; and All at length so affrighted, that they ran to their prayers for many years, to avert the wrath of God. Thus *Cæl. Rhodigin.*

Mr. *Sand*'s Relation runs thus:

This Mountain hath a double top; that towards the North doth end in a plain: the other towards the South aspireth more high, which when hid in clouds, prognosticates rain to the Neopolitans. In the top there is a large deep hollow, without danger to be descended

ſcended into, in form of an Amphitheatre; in the midſt a pit which leads into the entrails of the Earth, from whence the Mountain in times paſt did breath forth terrible flames; the mouth whereof is almoſt choaked with broken Rocks and Trees that are fallen therein. Next to this; the matter thrown up is ruddy, light, and ſoft: more removed, black and ponderous: the uttermoſt brow that declineth like the ſeats in a Theater, flouriſhing with Trees and excellent Paſtorage. The midſt of the Hill is ſhaded with Cheſnut-trees, and others, bearing ſundry fruits. The lower parts admirably cloathed with Veins, that afford the beſt Greek-Wines of the World: which hath given to the Mountain the name of *Di Sommo*, in regard of their excellency; affording to the Owners the yearly revenue of three hundred thouſand Duckats. So now it hath loſt the name of *Veſuvius*, with the cauſe why it was given, which ſignifieth a Spark, as *Veſeus* a Conflagration.

But never any thing appear'd ſo horrible, as that which happened in the firſt or third years Reign of the Emperour *Titus*, eighty years after Chriſt. For then it diſgorg'd ſuch boyling waves and flouds of Fire, as conſum'd the neighbouring Cities; And then alſo it was that *Pliny the ſecond*, that great ſearcher of Nature, and famous Author of the Natural Hiſtory, and then Admiral of the Roman Navy, deſirous to diſcover the Reaſon, was ſuffocated in his too near approaches, and reſearch after ſo great a Myſtery of Nature; As witneſſeth his Nephew, in an Epiſtle to *Cornel. Tacitus*. Not indeed wilfully, and on ſet purpoſe, as 'tis ſaid, (but I think falſly) of the other grand *Philoſopher*, that he threw himſelf into the contrary Element, becauſe he could not underſtand the ſtrange Myſtery thereof. *At that time not only iſſued forth ſuch ſtore of Smoak, that the very Sun ſeem'd to be in the Eclipſe; but alſo huge Stones; and of Aſhes ſuch plenty, that* Rome, Africk *and* Syria, *were even covered: And beſides Beaſts, Fiſh and Fowl, it overwhelmed with Pumice-ſtones, two adjoyning Cities,* Herculanum *and* Pompeios, *with the people ſitting in the Theater.* There were heard diſmal noiſes all about the Province, and Giants of incredible bigneſs ſeen to ſtalk up and down the top and edges of the Mountain (or rather in peoples extravagant fancies;) which extraordinary Accident was adjudged either a cauſe or preſage of the future Peſtilence, which raged in *Rome* and *Italy* long after. *Hieronymus Borgius* touching the horrible roarings and thundrings of this Mountain, thus ſets it forth in ſutable Verſe;

Then

Then remote Africk *ſuffer'd the dire heat*
Of twofold Rage, with ſhowrs of Duſt repleat:
Scorcht Egypt, Memphis, Nilus *felt, amaz'd,*
The woful Tempeſt in Campania *rais'd.*
Not Aſia, Syria, *nor the Towers that ſtand*
In Neptune's *ſurges*; Cyprus, Creet, (Joves *Land*
The ſcatter'd Cyclads; *nor the Muſes ſeat,*
(Minerva's *Town*) *that vaſt Plague ſcap'd: Such* [illegible],
Such vapours break forth from full jaws, then ſhone;
When Earth-born, horrible Orimedon
Hot, vomits ire, beneath Veſuvius *thrown.*

Dion affirms in a manner as much. But *Bodin*, the cenſurer of all Hiſtorians, doth deride it. Notwithſtanding *Caſſiodorus* writes as great matters of a later Conflagration; whereupon *Theodoricus* (firſt King of the Goths in *Italy*) did remit his Tribute to the damnified Campanians. *Marcellinus* further obſerves, *that the Aſhes thereof tranſported in the Air, obſcured all* Europe: *and that the Conſtantinopolitans being wonderfully affrighted therewith, (inſomuch as the Emperor* Leo *forſook the City) in memorial of the ſame, did yearly celebrate the 12th of November.* It alſo burnt in the ſixth year of *Conſtantine the fourth*; which was about the year of Chriſt 640: and at ſuch time as *Belliſarius* took *Naples*; (which was about the year 540) and groaned, but ejected no Cinders: and again when the Saracens invaded *Africa*, ſometime after, *&c.*

Plautina writes that it flamed in the year 685; prognoſticating the death of Pope *Benedict the ſecond*, with enſuing ſlaughters, rapines, and deaths of Princes. During the Papacy of two other *Benedicts*, the 8th and the 9th, it is ſaid to have done the like. The later, the laſt flaming thereof, which was in the year 1024; (yet often ſince it hath been wonderfully feared;) excepting of late years again. And although it hath made ſundry dreadful devaſtations; yet the fruitful Aſhes thrown about, did ſeem to repair the foregoing loſſes with a quick and marvellous fertility. At the foot of the Hill there are divers vents, out of which exceeding cold winds do continually flue; ſuch as by Venteducts from the vaſt Caves above *Padua*, they let into their Rooms at their pleaſure, to qualifie the heat of Summer. It ſeems Records of Hiſtory reach beyond the Beginnings and firſt Eruptions of this Mountain. For *Spartacus* the Fencer, and Ring-leader of the fugitive Bond-ſlaves (which was about

about the year of the Word 3880, and before Christ about 70.) no less a terror unto *Rome*, than *Hannibal*, did make this Mountain the seat of his War: where besieged by *Clodius*, he by a strange stratagem, with bonds made of Vines, descended into the bottom of the Hill, (being long before it first began to flame) and finding out a private passage, issued suddenly upon the unsuspecting Romans; seiz'd on their Tents; and pursuing his Victory, over-ran all *Campania*.

Since, The year 1610 has been memorable, for the burning flames of the Mountain *Vesuvius*; the which being renewed on the month of *February*, brought a very large wasting; but a great affrightment to the *Neapolitans*; who, solemn supplications being proclaimed, went in Procession with the Head of *Januarius*, their Patron, and Defender of their City, carried about; whereby the silly people were made to believe, the destruction hanging over their heads to have been turned away; even as they are to this day.

Also in the year 1631 was a new Eruption; Earthquakes and Roarings as (usually) preceding. And again in a flame in 1635, with an Earthquake in *Messina*; as likewise again in 1638. And indeed not quite appeas'd and extinct all that time, most likely. The same year 1634, or 35, (but this occasionlly by the by) even *England* shook, and trembled about *London*; a Marsh there boyling with black waters, &c. Also at *Wittenberg* it rained Brimstone; And in the month of *May* 1644, a great Wood, belonging to the Dukedom of *Norimberg*, of eight thousand Acres of Land, burned in a flame; with divers other like Prodigies. *Petav. Hist.*

Lastly, in 1660, *Vesuvius* again brake forth with Combustions.

There remains nothing more to add, but *Kircher's* particular relation and account thereof; who in the year 1638, ventured up to observe its nature and workings; As he had done *Ætna* and *Strumboli* before in the same year, when all those Mountains were outragious with most devouring Eruptions. Where, observing things past all belief in all of them, could do so much with him, that from thence he took occasion and beginning of happily setting upon *that glorious work of his Subterraneous World*; since accomplished.

Of an exact Search and Enquiry made into the Mountain Vesuvius, *by* Kircher, *in the year* 1638.

Having a very earnest desire, a long time, to understand the Miracles of Subterraneous Nature, it happened that at the same time, by command of my Superiours, I undertook a voyage into *Sicily* and *Malta*, in attendance on the most excellent Prince *Frederick*, *Land-grave of Hassia*, at that time chief Admiral, now a most worthy Cardinal, whose Confessor I was. Entring therefore into *Sicily*, I found such a Theater of Nature, displaying her self under wonderful variety of things, as I had with so many desires wished for. Sith what ever thing occurs, in the whole body of the Earth that is wonderfull, rare, unusual, and worthy of Admiration, I found contracted here, as it were, in an Epitomie, by a certain industry of wise and sagacious Nature.

Being inflamed therefore with an huge desire of searching out all things particularly. Above all things, first I ascended *Ætna*, the fountain of all other Prodigious Effects in *Sicily*; that I might by my own experience, and with my own eyes, find out the wonderful things, which Historians of all ages have writ thereof. Then with utmost diligence I searched the *Æolian* or *Hephæstian*, that is, the Laparitan Islands, now call'd the *Vulcanello's*, or Vulcanian Islands. And above all the rest, *Strongylus* (now *Stromboli*) and *Vulcano*. I search'd out also the Sicilian Straits, called *Faro di Messina*, no less dangerous for the incredible Reciprocations of its Ragings, than infamous for Shipwracks; with the wonderful motions of *Scylla* and *Charybdis*, and vicissitudes of their Ebollitions. And whatsoever things stupendous did occur, were presently committed to Table-Books; and after return home, seriously weighed and deliberated by solid and exact Reason, *&c.*

But in return home, with some certain private persons, we were by wonderful and unusual storms and ragings of the Sea, to the danger of our lives, forced upon the Shoars of *Calabria*, or *Terra di Otranto*; At the time of those horrible Earthquakes, and strivings of Nature, then outragious in those places; to the greatest peril of our lives. But had thereby opportunity of learning many Secrets of Nature. After the happening of all which, I had then a desire, being in those parts, to visit the famous *Vesuvius* also.

The

The Relation of which wonderful Earthquakes, now mentioned; we, according to our present method reserve to another place afterwards; passing them by here, to give first his particular account of *Vesuvius*, (though last with him) which is our present Argument.

The RELATION.

After therefore so great dangers sustained by Sea and Land; After having diligently searched out the incredible power of Nature working in subterraneous burrows and passages, I had a great desire to know whether *Vesuvius* also had not some secret commerce and correspondence with *Strongylus* and *Ætna*, in so powerfull a war and strife of Nature, as I had every where experience of before. I went therefore unto *Porticus*, (the Porch or Entrance) a Town scituated at the foot of the Mountain. Hence hiring an honest Country-man, for a true and skilfull companion, and guide of the wayes; (not without indeed an ample reward) I ascended the Mountain at midnight, through difficult, rough, uneven, and steep passages. At whose *crator* or mouth, when I had arrived, I saw what is horrible to be expressed, I saw it all over of a light fire, with an horrible combustion, and stench of Sulphur and burning Bitumen. Here forthwith being astonished at the unusual sight of the thing; Methoughts I beheld the habitation of Hell; wherein nothing else seemed to be much wanting, besides the horrid fantasms and apparitions of Devils. There were perceived horrible bellowings and roarings of the Mountain; An unexpressible stink; Smoaks mixt with darkish globes of Fires; which both the bottom and sides of the Mountain continually belch'd forth out of Eleven several places; and made me in like manner, ever and anon, belch, and as it were, vomit back again, at it. O the depth of the Riches of the Wisdom and Knowledge of God! How incomprehensible are thy wayes! If thou shewest thy power against the wickedness of mankind in so formidable and portentous Prodigies and Omens of Nature; What shall it be in that last day, wherein the Earth shall be drown'd with the Ire of thy Fury, and the Elements melt with fervent heat? Morning therefore waxing light, that I might search out the Constitution of the whole Interiours of the Mountain, with all the diligence I could, I chose a safe and secure place to set my feet sure upon; which was an huge Rock, of a plain surface; to which there lay open an Avenue, by a descent of the Mountain very far; And so I

went down unto it. Here taking forth my *Pantometer*, (or universal Measurer) I set upon the dimensions of the Mountain; and found by a Geometrical Computation, the compass of the *Crater* to contain almost three hundred paces, but the depth eight hundred. The Mountain all up and down every-where, cragged and broken. No gradual declining for any passage to the inward parts; but descended in its compass or circuit, after the manner of a Cylinder, made hollow directly and streight. And although the Bottom seemed to the eye to be contained in a more narrow circumference; yet according to Optick Accounts and Laws, That happened from the exceeding great distance, and profundity, from the innermost surface of the *Crater* or mouth. In the Center of the Bottom, Nature seem'd to have constituted, as it were, her Harth of Fire: And to say truth, a Shop or Workhouse to make a Vulcanian Kitchin; boyling with an everlasting gushing forth, and streamings of Smoak and flames; and imploy'd in decocting of Sulphur, Bitumen, and melting and burning other kinds of Minerals; and by a certain secret endeavour and enterprise, preparing for deadly ruines and slaughters afterwards to be committed. Sith the vapours included within; as they know not how to be contained: so they did discuse, or scatter the burden that lay upon them, with so great force and violence, accompanied with horrible cracklings and noises, that the Mountain seem'd to be tost with an Earthquake or trembling. Which whensoever it happened, the supream and softer parts of the Mountain, which clung together of Ashes, Cinders, Rains, and other Refuses of Minerals; being shook in pieces, and loosened by the trembling; and so falling like Hills, into the bottom of the Hellish Gulph; did from that various reflexion of the sound, stir up that crackling noise: So great and fearful a one, as that any, even of the stoutest and most undaunted heart, would scarce venture to suffer. The matter which was continually belched forth from the center of the Mountain, made as it were, a new Mountain, indued with wonderful variety of furrows, or hollow channels; which the various ebullition of the melted Minerals, flowing into all parts of the circumference; of a greenish colour now; from Brass; presently of a yellow colour, from Sulphur, Arsenick, and Sandarack: Now red; from Cinnabar, Minium or Red Lead, and Vermilion; then black; from Vitriol mixt with Water; or of an Ashy colour, from the very Cinders; did as it were, by the ingenious Pencil of Nature, form. This little Mountain; after the last burning of the Mountain, which happened

in

in the year 1631, (at which time proceeded great Earthquakes, as well as Noises and Roarings and Tremblings; as is its custom) hath grown so big, that we may thence very reasonably conjecture that it is hereafter likely to rise unto the same height, which it once obtained of old; unless it be destroyed by some new burning supervening: Which hath happened in this very same year I now write these things, in the year 1660. For that the Mountain outragious with a new and horrible burning, hath so cast down its top, and Crator; that it appears now much lower at this day, then what I a little before described it to be. And consequently, as it is found of greater circumference; so of lesser profundity. Having taken a view of all these things duly; and returning to *Naples*; the next day I betook my self into the Island *Ænaria*, which they call *Ischia*; of much note, and celebrated with great fame by ancient writers. And thence into the Phlegræan Plain, of *Puzol* Fields, Vulcan's Market-place or Theater; (of which before.) And whatsoever, either the Antients or Moderns, have related wonderfull of those places, I found to be most true.

It is also taken notice of in History, that there was an Eruption and great Burning, near *Carignole* in *Terra di Lavoro*, which laid three Acres of Ground, all in meer Ashes and Cinders. *Tuscany* also hath a burning Mountain in the *Apennine*; and another in the Fields of *Bononia*. There are also Laky Ditches, Pits, and Dens, between *Pistorium* and *Petra Mala*, belching forth perpetual Globes of Flames, especially by night. There are noted also in the Fields of *Mutina*, two famous places full of Burnings, *&c.* But these with the rest of *Italy*, have been barely enumerated before; of which we have nothing further remarkable to add.

And so we are at last come to the main Fountain and Springhead, in a manner, as we may say, of all the subterraneous Fires of these Parts, with their manifold desolating Eruptions, *Ætna*, now *Monti Gibello*.

CHAP.

CHAP. VI.

Of the Remarkables of the grand Volcano Ætna, in especial: and its most remarkable Eruptions: together with the Vulcanian Islands adjoyning.

NOtwithstanding the horrid face of things, by reason of the frequent, prodigious, and mischievous Eruptions and Devastations of *Ætna*: Notwithstanding it continually sendeth forth dreadful flames of Fire; to the astonishment of all Beholders; and that its Soyl springs abundantly with often and eternal Burnings: Yet those subterraneous fountains of Fire, that continually feed and supply these Vulcano's; and the abundance of fat, oily, sulphureous, and inflammable matter and fuel, or nourishment, wherewith the whole Country thereabouts, and all the Island over, is so richly stor'd and manur'd with, by Natures own bountiful hand, (everywhere plentiously producing Sulphur, Bitumen, and other rich and fat Earths and Marles, *&c.*) make *Sicily* one of the most fertile Islands in the World.

For the Soyl is incredibly fruitful in the best Wine, in Oyl, Hony, Saffron; Minerals also of Gold, Silver, and Allom; together with plenty of Salt and Sugar. There are also Gems of Agats and Emeralds. Quarries of Porphyre, and Serpentine. It yieldeth also great store of the richest Silks, which grow plentifully about *Messina*, the chief City. Variety of most excellent and delicious fruits, both for taste and colour; with such abundance of all sorts of Grain, that it was called in old times, *Horreum Romani Populi*, or the Granary of the Roman Empire; whence also *Cicero* call'd it, The City of Romes *Soul*; and doth now furnish some parts of *Italy*, *Spain*, and *Barbary*, besides *Malta*, and the adjacent Isles, with that which she can spare of her superfluities. Nay, *Tully* doth not only call it, the Granary and Storehouse of the City of *Rome*, in regard of Corn; but adds, that it was accounted for a well-furnish'd *Treasury*; as being able of it self, without charge of the State, to cloath, maintain and furnish the greatest Army, with Leather, Corn, and Apparel. And if *Diodorus Siculus* may be credited in it, he tells us, that about *Leontium*, now *Lentini*, and some other places, Wheat did grow of

it

it self without any labour of the Husbandman. At this day, in some parts of the Isle, the soyl is so exceeding fruitful, that it yeelds unto the Husbandman an hundred measures of Corn for one. And certainly the Corn of this Country must needs yeeld a wonderful encrease, the King of *Spain* receiving an hundred thousand Crowns yearly for the Custom of Wheat. In this Country also is the Hill *Hybla*, so famous for Bees and Honey. But too much of the Country. We return to its greatest Wonder of all Ages, and indeed *a vernaculous kind of Portent thereof*, the horrible Mount *Ætna*.

It is a marvellous Hill, of fearful and stupendous Fires & Flames; as it were, the very Mouth of Hell; distant Eastwards, ten miles from the City *Catania*, situated at the foot thereof; From which it ascends by degrees, to so many miles height. Others reckon it fifteen miles from *Catania*: but indeed scarce ten English miles. And yet its full height in a direct descent, according to its Axis, is computed by exact Geometricians 30 miles; (as *Kircher* has it) except the Printer has added a Cypher too much: as must needs be. This ancient City was built, as some say, in the year of the World 3469, eighty nine years after *Rome*; and near 500 before Christ. But others in the year 4462, about 500 years after Christ. (The first, without all doubt, by most Authentick Authors, the truer account:) and receives both loss, and (if *Strabo* may be believ'd) advantage, from its nearness to *Ætna*. For the ejected flames have heretofore committed horrible wasts, which gave *Amphinomus*, and *Anapius*, two Brethren, an occasion to become famous for their Piety; who rescu'd their Parents ingag'd by the Fire, and bear them away on their shoulders: whereof *Ausonius*;

Who will forget Catania? *of high fame,*
For Piety of Brothers, sindg'd in Flame.

Yet it was never known, in all this time, to have been wholly ruin'd or destroy'd, by the terrible threatnings of so troublesome and dangerous a Neighbour; that spares none in his violent raging fits and Convulsions: Yet has been shrewdly in danger sometimes, and much havock'd and spoyl'd in some parts thereof; whereby it may appear, *that this last and present Eruption* (so prodigious and fearfull) *has not been the greatest; as it has not been the first by some hundreds.* Several Towns and Cities lay round about it; All or most now buried in Ashes and Ruines, by the late excessive burning and consta-

conflagration; even as many have been so in former times.

It was here in this Infernal Mountain, where the Poets fable that *Jupiter* with his Thunderbolts struck down the Rebel-Giants, the Cyclops's, condemned to be *Vulcan*, the Godd of Fires Hammerers; whom they feign, forges here his Father *Jupiter's* Thunderbolts, and the Arms of the *Heroes*; and laid this Mountain upon *Enceladus* the grand Conspirator's back, there said to have been buried; and his hot breath to have fired the Mountain, lying on his face: As *Virgil* poetizes;

Enceladus *with Thunders struck, they tell,*
Under the weight of this huge Burthen fell.
Above him was the mighty Ætna laid,
Who now breaths Fires, through broken Trunks convey'd;
And as he weary turns, a Thunder-Crack
Sicily *shakes; and Heav'n is hung with Black.*

Though Naturalists interpret the Giants, to be hot Spirits included in the Earth, which finding no passage out, sometimes burst open most high Mountains, and rush out with violence; and even shoot forth, as it were, their darts against Heaven. The Poets therefore feign'd these Giants to have assaulted the Godds in the Phlegræan-Plains: but to be struck down, some into *Ætna*, others into the Vulcanian Islands; and others into Hell. And as the grosser Heathen suppos'd it to be *Vulcans* Shop, and the Cyclops's; so the gross Papists there, take it for the place of *Purgatory*; All alike unfallible.

And here some report, or rather fable, that *Empedocles* affecting Divine Honour, departing from his company secretly by night, leapt in at the mouth of this Mountain, that he might be reputed an Immortal God; as *Horace* witnesses.

Empedocles *to be a Godd desires,*
And casts himself into th'Ætnaan Fires.

But that his Iron Slippers, or Brazen Shoes, which the Fire had thrown up again with its belching flames, to have discovered the matter. But wiser men more rightly relate him, to have perished only; as a curious and ventrous Observator; going about to search out this Fiery Lake, and thereby to have fallen into some pit, or ditch, and consumed in the Burning.

The

The barren top of the Mountain is encompaſſed with a Bank of Aſhes, Cinders, and Pumices, *&c.* of the height of a Wall. In the middle is alſo a round Hill, of the ſame matter and colour; wherein be two great Holes, faſhioned like unto Cups, which be called *Craters*; Out of theſe do riſe ſometimes ſundry great flames of fire; ſometimes horrible ſmoak; ſometimes are blown out burning ſtones, in infinite number. Moreover, Before the ſaid Fire appears, there is heard within the ground, terrible noiſe and roaring. And alſo (which is more marvel) though it continually burns, nay when the ſmoak and fire is moſt abundant and fervent; yet round about the top of the ſaid Hill and uppermoſt parts, where the Fire is greater and continual, are ſeen perpetual and moſt deep Snows, and hoary Froſts. And from all Antiquity has this Mountain burnt after an horrible manner; and often-times affects the Neighbouring Regions with incomperable and unvaluable loſſe; though yet not a more fertile Region in the whole World, as was before deſcribed, &c. The Cinders and Aſhes of *Ætna*, as *Pliny* teſtifies, fall down an hundred and fifty miles diſtant from thence. Mr. *Sandys* makes ſuch a following Deſcription of it.

Ætna (now *Mount Gibel*) call'd by *Pindar*, the *Celeſtial Column*, is the higheſt Mountain of *Sicily*; for a great ſpace leiſurely riſing; in ſo much as the top is ten miles diſtant from the uttermoſt Baſis. It appeareth Eaſtward with two Shoulders, having an eminent Head in the middle. The lower parts are luxuriouſly fruitful; the middle woody and ſhaded; the upper rocky, ſteep, and almoſt cover'd with Snow: yet ſmoking in the midſt, like many conjoyning chimneys; and vomiting intermitted flames; though not but by night to be diſcerned: As if Heat and Cold had left their contentions, and imbraced one another. This burning Beacon, doth ſhew her Fire by night, and her Smoak by day, a wonderful way off: yet heretofore diſcerned far further; In that the matter perhaps is diminiſhed by ſo long an expence; My ſelf (ſayes he) have ſeen both plainly unto *Malta*. And the Mountain it ſelf is to be diſcovered an hundred and fifty miles off by the Saylors. Thoſe that have been at the Top do report, That there is there, a large Plain of Cinders and Aſhes, invironed with a Brow of the ſame; And in the midſt an Hill of like ſubſtance; out of which burſteth a continual Wind, that keepeth an horrible rumbling; evaporating flames and ſmoak; which hangs about it like a great long Cloud, and often hurling forth Stones and Cinders. Wherefore the ſtory of *Empe-*

docles the Sicilian Philosopher's throwing himself down head-long thereinto, is by some call'd into question. For it is impossible to be approach'd, by reason of the violent Wind, the suffocating Smoak, and the consuming Fervour: (yet he might approach too near, and perish:) This Mountain hath flamed in times past so abundantly, *That by reason of the smoke, the Air involv'd with burning Sands, and thick Vapours; The Inhabitants hereabout could not see one another* (if we may give credit to Cicero) *for two dayes together. The extraordinary eruption thereof hath been, and is to this day, reputed ominous.* For so the most famous Conflagrations, in former times, hapned hard before the Servile War in *Sicily*; which was not pacifi'd and ended, but by the slaughter of three score and ten thousand of the Slaves, (who had taken up Arms against *Rome*) by the Prætors; *at which time it raged so violently, that* Africa *was thereof an astonish'd Witness.* This was about the Year of the World 3900. not long before Christ. And so shortly after the death of *Julius Cæsar*, when not only the Cities thereabout were damnified thereby, but divers in *Calabria* also; and portended those Proscriptions and bloody Wars, which did after follow. But these great Eruptions of Fire, are not now so ordinary as they have been formerly; The matter which gave Fewel to it, being wasted by continual Burnings: So that the flames which issue hence, are hardly visible, but by night; though the smoke shew it self the most part of the day: Yet even at this day, once in three or four years, it falleth in great flakes, on the Countrey below, and Vales adjoyning; to the terror of the Inhabitants, the destruction of their Vintage, and great loss of the Countrey. But that, they say, is recompensed by the plenty of the following Years; The Ashes thereof (according to *Strabo*) so bathing and enriching of the Soyl, that both the Vines, and Corn-fields are much bettered by it, and prosper above admiration. For indeed we find by experience, that *Turf* of the Ground, burnt to Ashes; and so spread on Land, and ploughed into it, doth yeeld a very great improvement, even to barren Soyls. Howbeit at this day, much Ground about it lies wast, by means of the ejected Pumice.

Besides, the Countrey hereabouts is daily forraged by Thieves, who lurk in a Wood of eight miles compass, that neighbours upon *Catania*.

But

But *Virgil*'s admirable Deſcription may ſerve for all.

Ætna here thunders with an horrid noiſe,
Sometimes black Clouds evapoureth to Skies,
Fuming with pitchy curls, and ſparkling Fires,
Toſſeth up Globes of flames; To Stars aſpires:
Now belching Rocks; The Mountain's Entrals torn:
And groaning, hurls out liquid Stones thence born
Through th' Air in ſhowres; and from its bottom gloes,
Like boyling Fornace; ———————

The reaſon of theſe Fires, is the abundance of Sulphur and Brimſtone, contained in the Boſom of the Hill, inkindled by Subterraneous Heats, Spirits, and Fires; with the free ventilation of the Sulphurous, and eaſily inflamable Air, and agitating Winds, through theſe open *Vulcanian* Vents and Funnels; with innumerable Chinks, Trunks, Pipes, and Caverns, with other conveyances through the Earth, *&c.* Alſo through the Chinks and Chaps of the Earth, there is continual more fewel added to the Fire; the very Water adding to the force of it. As we ſee the Water caſt on Coals in the Smiths Forge, doth make them burn more ardently: And beſides, prepares the matter with due moiſture to be fit Fuel for new Fires, *&c.* And *Sicily* is an Iſland all over Cavernous and Fiſtulous, and pervious to the penetrating Winds, and under-ground Fires, and inflamable Spirits; and within abounding with Sulphur, Bitumen, and other fit Fuel and Materials, *&c.* And ſo is moſt convenient both for inward Combuſtions, and outward Ventilations, and thereby for the extreameſt Inflamations and Burnings. But the Original Sourſe and Fountain, or firſt and principal cauſe of all theſe, are by ſome later accounted to be, the Subterraneous Abyſſes, and Storehouſes of Fire and Heat, which Nature has provided and furniſhed her ſelf with under ground; in her inward parts, for the neceſſary uſes and occaſions of her exteriour, *&c.* As was at the beginning obſerv'd. The reaſon of this flame is thus ſet down by *Ouid.*

A Rozen Mould theſe fiery flames begin,
And Clayie Brimſtone aids that Fire within:

Yet when the ſlimy Soyl, conſumed, ſhall
Yeeld no more food to feed the Fire withal,
And Nature ſhall reſtrain her nouriſhment,
The flame ſhall ceaſe, hating all famiſhment.

But more fully by *Lucretius.*

Hollow the Mountain is throughout; alone
Supported well-nigh with huge Caves of Stone.
No Cave but is with Wind and Air repleat;
For agitated Air doth Wind beget,
Which beats th' impriſoning Rocks, when hot it grows.
The Earth chaf't by his fury; and from thoſe
Strikes forth fire and ſwift flame: It ſelf on high
It mounts, and out at upright Jaws doth flie:
And Fire ſheds far off; far off dead Coals
Tranſports: and fumes in miſty darkneſs rowls.
Ejecting Stones withal of wondrous ſize;
All which from ſtrength of ſtrugling Winds ariſe.
Beſides; againſt the Mountains Roots, the Main
Breaks her ſwoln Waves, and ſwallows them again.
From whence unto the Summit of th' Aſcent
The undermining Caves have their extent:
Through which the Billows breath; and flames out-thruſt
With forced Stones, and dark'ning ſhowrs of duſt.

Beſides, as was ſaid before, *Ætna* is full of Sulphur and Bitumen, apt to be kindled; And ſo is all *Sicily*, the principal Reaſon that it is ſo fertile.

But after all this, we will give you *Kircher*'s later, and more particular Relation, and Deſcription, both of it and its Cauſes; and of its moſt noted Eruptions, *&c.*

A Description of *Ætna* by *Kircher*.

Wherein, as in a certain Prototype, the Reasons of Subterraneous Fires, and their never failing food, are demonstrated, as we use to say, to the Eye.

When I survey'd *Sicily*, in the year 1638. before all things, I thought fit to examine the Mountain *Ætna*, most of all celebrated by the Monuments of all Writers. A great Prototype, I say, of all burning Grounds; and that the most famous type, of almost whatsoever kind of ragings, by Sea or Land, outragious. And with this one onely spectacle of Nature alone, *Sicily* is (and ever was) admirable. Seeing you can scarce find an Author either of the Antients, or Moderns, whom the violence of its ferocious nature, hath not drawn into admiration and astonishment. Yet because they have only beheld afar off the genuine Causes of so great effects: We coming a little nearer to the matter, from those things which in these last times, have been oberved with my own eyes, intending to prosecute its Nature and Constitution, we will endeavour to demonstrate opportunely the cause of so strange and exotick effects.

Its heights top and bigness.

Ætna therefore, is one onely Mountain, rearing up on high its Top or Spire, unto thirty miles, according to the Axis (or direct line through the Center, or midst) as by *Maurolicus* and *Clavius* attested, who searched out its altitude, by a Geometrical account and computation. But it takes up sixty, or as others say, an hundred miles space, with its roots, spread wide round about; fruitful with fat Fields, Vineyards, Fountains, Pastures, lying round about. And Woods of Pines and Beech; and full of Forrests of most high Fir-trees. But at the utmost top is broken and cragged, with unstable Cinders, and Pumice stones; and cleaves open with a most vast Crater, or deep mouth'd Cup of twelve miles in compass, which in a steep descent streightens it self narrower, even to the bottom of Hell, as it were. A most horrible Præcipice to see to, most formidable with flames, ruines, both from the very bottom, and from the sides of the Mountain; with an horrendous roaring and bellowing, not unlike bursting forth of Thunders. That the very imagination and thoughts of the fire and ruines, so nigh at hand,

The largeness and horrid face of its Crater.

hand, could not, but presently at the first reincounter, amaze and affright any man; although the most audacious and fearless; and make him start therefrom, as it were from a certain infernal Gulph of Hell.

And I doubt not but those burnings which are here seen in all Ages, have by the constant rejectings forth of Ashes, much augmented this vast Mountain; which on every part, both the ghastly sight of steep descents of Cliffs; and the Cindry, and Pumice-stone-like face of burnt Rocks; as also the appearance of huge Dens, (one whereof you may see capable to contain thirty thousand men easily) formidable with burnt Pumice-stones, as also with refuses and recrements of various melted Mineral Matter, does abundantly shew. You may see in many places, paths of huge Torrents, from the said matter, call'd *Sciarra*, which have left, as it were, certain foot-steps and tracks of great havocks, and destructions, from the fiery flux or flowing of the melted Metal. In the very top, Snows, and Ashes or Cinders; as if they had meditated an Eternal Wedlock, are seen to overwhelm all things with a sad and doleful countenance. Verily, by so much more dangerous to incautelous Visiters; by how much certain profound devouring-Gulphs, covered over with Snow and Ashes, and stretch'd forth all along, descending into the inmost Abysses, without bottom or end; are more frequent. Which as they have swallowed up very many, unadvisedly coming near to view without a guide; so have, by their ruine, left an example to others; not rashly to venture upon those places, which by such occult Artifices and Machines, and hidden deceipts, cheat Mortals out of their lives. Even as Fa. *Matthew Taveran*, a curious searcher out, as of all natural things, so of this Mountain also; try'd and experienced with great peril of his life. And to be short, All the matter of the upper part of the Mountain, seem'd to be nothing else but a confused heap, and hanging of it self aloft, of Cinders, Pumices, and Stones, which they call burnt Coal-stones. Which seeing it is on every hand exposed, and easily penetrable, both to Mineral Spirits within; and also without, to Snows, Rains, Hails, and Winds. It ought certainly, not to seem wonderful to any, that this adust and burnt matter, as it is impregnated, with new and new provision alwayes from Heaven; so it should conceive, in succession of time, new Generations and increases, so as to burn again afresh; and without end, again and again flame with new Conflagrations. As *Virgil* testifies;

Paths or tracts of fiery floods or rivers.

Snow and Ashes cover its top

The new generating of Combustible matter.

What-

Whatever furious matter feeds the Fire,
As soon as burnt, goes out: hath spent all its Ire,
Wherewith to rage: Cinders and Seedless ground
Lie fallow: which course of it suffers round:
And thus exhausted by a thousand fires,
Renews its former strength; new flames respires.

For whereas, in the utmost bottom of this Hellish Gulph, the fire is at no time extinguished, but alwayes sends forth some marks and tokens of it self, either boyling heat, or smoke, or flame, as I have often in the examination of the Mountain observ'd: Yet outwardly it begins to grow fierce and terrible, but only at certain intervals of time, more or less, according to the plenty of the combustible matter heap'd up together. And by how much the longer it hath ceased; as if the matter was more ripen'd, vegetated and grown, for burning; by so much it bursts forth with greater violence; and together with the very flame, sends forth huge heaps of Sands; and as *Lucretius* asserts, *Prodigious Stones of wondrous weight hurls forth.*

A Description of the Ætnæan Crater, or (deep and wide-mouth'd) Fire-Cup.

The Crater, or Fire-Cup of Mount *Ætna*, is found by different Observations to be of a different largeness and capacity. There are some, who say, they have observ'd it to be two miles, and eighty paces wide. Others thirty miles. Others, lastly, four hundred miles. (No question here must be some mistake in the Printer, adding too many Ciphers to the numbring Figures.) But it cannot be that in an Orifice, expos'd to so great tumultuations, and continually agitated and tossed, with so many assaults, fits, and convulsions of ferocious, and rageing Nature; it should not be found, ever and anon; sometimes larger, sometimes streighter; according to the condition of the Times. Which I my self also with greatest admiration have try'd; not in *Ætna* only, but also in the *Liparitan* Mountains; yea and in *Vesuvius* too; sith the Mountain, even at the least more vehement eructation, is much shook; and from its

its ſhaking, heaps off more diſeaſy and ſlippery matter being gathered together, and accruing to the Mountain, fall down alwayes with the Mountains more violent jogging, and convulſion, as it were; which heaps, as they are now big, with a new birth; ſo they give new food and nutriment to the Fires. And ſo from this fall of the Mountainous parts; its neceſſary that the Crater be made wider; whence it comes to paſs, that the interiour parts of the Mountain riſe up and ſwell, increaſing by little and little; and the empty places of the diminiſh'd, or leſſened Crater are fill'd up. Whence of neceſſity likewiſe, the Crater of the Mountain muſt be rendred ſtreighter too. Yea Hiſtories relate, that the matter heap'd up within, from the falls, have thereupon grown to ſuch an excreſcency, that for the courſe of many years, it ſent forth neither ſmoke nor fire; And the devouring Gulph to have yeelded acceſs and admiſſion, to the more curious, very far, without all hurt and danger; till the fuel of new copious matter, and now ripe and mature again to conceive fire; aſſaulting and ſetting, as it were, again upon the Mountain; and being re-kindled, having ſhook off its Yoak, by ſo much the more powerfully wax'd fierce with horrendous burnings; by how much its ſupply of combuſtible matter was greater and more ready. And this lot all the *Vulcanian* Mountains undergoe; which ſometimes making reſpits, grow unto an immenſe greatneſs, by the coacervation of matter falling in; ſometimes by occult Machinations, and contrivances of Subterraneous Fires, the Fuel and Suſtenance of the prepared matter being kindled; That which was in ſo many years exceedingly grown, is ſhook aſunder by horrible Tempeſts of burnings, and vomits it out even from the loweſt Hell of the Mountain; even as at this day is apparent. Which ſpectacle is ſo formidable, that there is none ſo ſtout-heartrd, that can look into it without fear; and, as we ſay, his Hairs ſtanding an end, and his head turning round with giddineſs. The devouring Gulf is ſo deep, that it exceeds all eye-ſight; and fearful with Rocks, riſing up out of the ſides like Pyramides. And whereas the ſides by a direct and perpendicular guidance and conduct of the Rocks verge, or bend and incline downwards, in a Parallel (and equal) deſcent: Yet according to the Laws of *Opticks*, they ſeem by reaſon of their too much diſtance, to meet in the Centre; which has impos'd on many Obſervators, deluded by this *Optick* Mockery, to think, the interiour ſides of the Mountain to be drawn cloſe and ſtreight, into a Conick Surface, and outſide. In the bottom (wonderful

An horendous ſpectacle of the Ætnean Gulph, or Whirlpit.

derful to be ſpoke!) the Mountain alwayes from continual eructation of Mineral matter, undermines and attempts, I know not what, towards the conſtituting and erecting a new Fabrick of a Mountain; And accordingly I remember, I alwayes obſerv'd (as it were) a certain Laky Pit, gliſtring with melted Metal. The ſides up and down, by fit and correſpondent paſſages, vomit forth perpetual Smoak in abundance of places; which by night we underſtood to be an enkindled flame. This voraginous Gulph is never without roarings and bellowings; which now and then it utters ſo horrendous, that they make the very Mountain it ſelf to quake and tremble. In a word whoſoever deſires to behold the power of the only Great and Good God, let him betake himſelf to theſe kind of Mountains; and he will be ſo aſtoniſh'd and ſtupified with the ineffable effects of the Miracles of Nature, that he will be conſtrained ever and anon to pronounce, from the moſt intimate and inmoſt affection of his heart; *O the depth of the Riches and Wiſdom of God! How incomprehenſible are thy Judgments, and how unſearchable thy wayes, by which thou haſt conſtituted the World!*

A perpetual Exhalation of Smoak.

Sounds and formidable crackling noiſes.

The Mountain is ſo high, that from thence all *Sicily* may be ſurvey'd at once; Yea, and your ſight help'd with an opportune and ſeaſonable time, may reach even unto *Africa*. But if by any Tempeſt the Mountain be troubled and diſturb'd; then you would think, that there was an end of the lives of all converſant there: All things are ſo involv'd with horrendous Storms and Whirlwinds, together with thick Snows and Cinders.

I ſaid a little before, that out of the ſides of the Mountain great plenty of Smoak mixt with Fires, was diſcovered in very many places, which Æſtuaries or raging places, if in time they be overwhelm'd, either with the concuſſion and ſhaking of the Mountain, or any other accident; Then the raving fury and madneſs, as it were, of the Mountain growing on, it has been found to prepare and get its *exit* and way out, even from other places, through the outmoſt ſurface of the Mountain; which when it comes to paſs, it effects ſuch horrid clefts and openings, and ſuch wide-mouth'd divulſions, with ſuch formidable paſſages of the Subterraneous Vaults and Store-houſes; which aſtoniſhed with admiration we beheld, even to this very day, ſometimes to have been. I ſaw a Cavern, which would eaſily contain an Army of thirty thouſand men; as a little before we hinted.

Eruptions of Fires in many places.

An huge Cave or Den.

There is there alſo a moſt dark and Caliginous Den, which they

call, *La Grotta della Palomba*, of ſuch profundity, as well as capacity; that the Inhabitants of the Mountain think, that therein is a paſſage made by ſome Submarine path to the Liparitan Iſlands. But that from theſe and the like Caverns, and under-ground Vaults, fiery Flouds and Rivers have iſſued forth; The Channel hard by, fill'd and ſtuft with Pumice and aduſt ſtones, which the Sicilians call *Sciarra's*, does abundantly inſtruct us. Which Torrents indeed of liquid and melted Fire, Hiſtories deliver to have flown and run down ſometimes to eighteen miles in length; and ſometimes, now one, then two, three, or four miles ſpace in breadth. So that hereupon none can ſufficiently admire, from whence ſuch an incredible fertileneſs of melted matter ſhould take its original; where, and in what places it ſhould have ſhops, and fuſory or melting fornaces, of ſo great capacity, hidden and laid up underneath, to the liquefaction and melting of ſo many Minerals and Metals.

The length & breadth of the fiery Torrents.

The wonderfull works of God.

But as theſe inacceſſible works of God, are moſt remote from all Senſe; ſo they can never be enough penetrated and pry'd into by any humane Underſtanding; And it remains only to wonder and admire at, what cannot be conceived of the incomprehenſible Majeſty of the Divine Works. For if you undertake an account or computation of the melted matter, according to the calculation of divers times; you would find it to grow to ſuch an extravagant heap, that it would far exceed twenty *Ætna's*, in its bulk. But that we may more clearly confirm our Account and Reckoning according to Reaſon, I will ſubjoyn here a brief *Chronicle*, of the more famous and celebrated Fires and Eruptions; wherewith the Mountain fiercely raging with horrendous deſtructions and ſlaughters, has at all times exerted and diſcovered its Burnings.

A Chronicle of the Eruptions, and Burnings of Ætna.

In the time of the Janigenæ about the y. 2600.

1. In the time when the *Janigenæ*, or poſterity of *Janus*, going about to ſeek new Colonies, firſt entred *Sicily*, (which was about the year of the World 2600; almoſt as many years before Chriſt, as ſince; and almoſt as far as any Writings or Records;) there was ſo great a burning of the Mountain, as *Beroſus* delivers it; that the new Planters, leaving the Iſland for fear of the Deſolation, went to ſeek new Colonies and Seats in *Italy*; by no means in the leaſt thinking that a commodious ſtation, which the horrible fierceneſs of Nature had rendred ſo formidable, with ſo many, and ſo great, and

ſo

ſo deadly and tragical ſlaughters and deſtructions; ſo that hence, upon this occaſion, ſeems to be introduced the Fable of *Proſerpina's* Rape. (And hence perhaps may be concluded, that this Mountain has from the Creation, been uſed to vomit forth Flames, and may do ſo to the Worlds end; though *Ovid* divines otherwiſe.)

Ætna, which flames of Sulphur now doth raiſe;
Shall not ſtill burn; nor hath it burnt always.

2. The *Janigenæ* ſometime after followed the *Sicanians*; who were drove away from theſe Eaſtern parts to the Weſtern, by new Tempeſts and Whirlwinds of the Ætnæan Burnings.

3. In the time of the *Argonauts*, (about the year 2714, and above a thouſand before Chriſt) which when the moſt ancient *Orpheus* had ſeen, ſang thus. *In the time of the Argonauts. year 2714.*

But now arriv'd at th' Lilybæan Strait,
We feel fierce Seas; On high Fires reach our ſight,
Of hot Enceladus, *threatning dangers great.*

4. In the time of *Æneas's* expedition, who repulſed from the ſhoar of *Sicily* by the *Cyclopſes*; and greatly terrified by the burning of the Mountain, left that deadly ſtation. *Virg.* *Of Æneas his Expedition, the year, 2768*

And to unknown Cyclopian Coaſts we run;
The Port was great and calm, with ſheltring ſhoars;
But near, from horrid Ruines, Ætna *roars, &c.*

5. Under the Dominian of the *Greeks* in *Sicily*, *viz.* from the ſecond Olympiad, even to the 88th; *viz.* from about 3180, till towards 3600, as *Thucidides* teſtifies, who lived in this time; The Mountain was all on fire, with three huge Burnings. A little after which time, the Mountain raging anew, is ſaid to have drawn even *Pythagoras* himſelf into higheſt admiration. Alſo in the time of *Hero*, when Hiſtories deliver, that even *Empedocles*, an obſerver of the Mountain, then periſhed. *From about 3180, till towards 3600.*

6. In the time of the Roman Conſuls; (for about 450 years) Four remarkable Burnings to have happened, is collected out of various Authors; *Diodorus*, *Polybius*, and others. Whereof, that before the Servile Wars, about 3830, was prodizious; The Mountain belching forth into vaſt Fires, and ſpread it ſelf far and wide. Of which before. *In the time of the Roman Conſuls, from about 3440 to 3900.*

It seems also to have reach'd *Catania* it self, when the two pious Brethren, before mentioned, rescuing their Father, perished all in the Flames.

Of Julius Cæsar. 3960. 7. In the time of *Julius Cæsar*, (about fifty years before Christ) *Diodorus* delivers, that *Ætna* did again rage most violently; And which they will have, portended the death of *Cæsar*. For it is reported to have been so great, that the Sea with its fervour and boysing heat, burnt even the very Ships, as far as the *Vulcanello's*; And the Fish being extinct, and decocted or boyled. And so within twenty years that the Mountain burnt four times.

Of C. Caligula *Cæsar, in the year of Christ* 49. 8. In the time of *Caius Caligula*, forty nine years after Christ, the Mountain did again rage so, that *Caligula* abiding at that time in *Sicily*, and possest with the terror of the impendent mischiefs, betook himself to safer stations there. Yet they relate, that *Hadrian Cæsar*, in the greatness of his mind, to have ascended the Mountain very far, whilst yet it raged, to consider more nearly so great Miracles.

About the Martyrdom of St. Agatha. 9. About the Martyrdom of *St. Agatha*, the famous Martyr of *Catania*, by whose merits and intercession (as they there fondly imagine) it was effected, that the Mountain, although growing fierce, yet durst not touch or meddle with *Catania*. And so ever since have reposed great confidence in her, and her Reliques; which in this late fiery inundation, the *Religious* carried in procession, with multitudes of people, whipping and mortifying themselves, with all signs of penance. But enraged *Vulcan* would not be scarr'd away nor appeas'd so. And yet 'tis like they will be fondly made to believe still, that 'tis by her vertue and merits that the City is preserved: For which (no doubt) she shall not lack her Festival Honours, and Publick Solemnities.

In the year 812. 10. In the time of *Charles the Great*, in the year 812; who also much terrified with the fierceness of the Mountain, is said to have sought safer places.

In the year 1160 11. From the year 1160, to 1169, all *Sicily* was shaken with huge Earthquakes, and the Mountain *Ætna* forming mightily, overthrew all the circumjacent places with incredible desolation; with the ruine of the *Cathedral Church of Catania*; In which also the Abbot *John* with his Monks was overwhelmed, and perished: (St. *Agatha* was to blame sure, and too too unkind.)

In the year 1284. 12. In the year 1284, a fearful burning happened about the death of *Charles* King of *Sicily* and *Arragon*.

13. In

13. In the year 1329, even till 1333, the Mountain raged after an horrible manner; In the time of the King *Arragon*. *In the year* 1329.

14. In the year 1408, under King *Martin*. 1408

15. In the year 1444, even to 47, again and again. 1444

16. In the year 1536, even to 37, it sent forth a fiery floud, and Rivers of Flames; bringing desolation to the bordering places. 1536.

17. In the year 1554, raging more than ordinary, it battered *Catania* it self, its Suburbs and Fields, grievously. But *St. Agatha* forsooth, still came to help in time of need, and defended it still. 1554

18. In the year 1633, even to 39, the burning raged by so much the more formidable, by how much it lasted the longer time; which seeing many have described, I will not insist in reciting it. 1633

19. In the year 1650, raging afresh on the Northern and Eastern side, and bursting asunder the Mountains, it vomited forth such a quantity of Fires, that it almost brought *Brontium* into utmost hazard and destruction, with its fiery Torrents. 1650

20. Lastly, this present year 1669, the most horrible of this Age, for its mighty devastations, sorely threatning even *Catania* it self. And all respects considered, perhaps not inferior to any former Ages; according to the late publick Relation, universally known; For its fiery Torrent was as vast for length and breadth, as any of old; and approach'd the very Walls of the City, ruining many Houses near thereunto. And which is remarkable, by the huge quantities of congealed matter, hath formed a convenient Port over against the Castle, seventy foot deep in water, able to contain many Ships. 1669

Corollary I.

From these things it plainly appears, that the Mountain, its matter being consumed, takes respit; sometimes for a greater, sometimes for a lesser space; till at length increased by new provision of combustible matter, it breaks forth, and acts those Catastrophe's, which with admiration we read of. And yet it is so far from being diminished by so great an eructation of matter, that it seems rather to be augmented. Sith indeed the Citizens of *Catania* digged for Pumice-stones, and opening the Earth the depth of an hundred Palms, found Streets paved with Marbles, and various footsteps of Antiquities; which plainly teach, that Cities built here of old time, have been overwhelmed with the castings off, or rejectaneous offalls and off-casts, not without the great increase of the Mountain. They found besides,

beſides, very many Bridges of Pumices, which were made, and conſiſted only out of the meer flux or flowing of the fiery Torrents; the Earthy ſofter ſubſtances being eat away. And of late, not far from the City, an Image of *our Lady*, was under Earth (as they ſay) accidentally found. Whoſe reputed Miracles have got her already much fame. From the ruines, no doubt, of ſome Religious Place, *&c.* Flame alſo now and then appears in the exalted or higher rais'd Earth; anon diſappears: which are clear and conſpicuous ſigns and tokens of the Earths being rais'd. Yet *Ælian* tells us, that as well *Ætna*, as *Parnaſſes* and *Olympus*, did appear to be leſs and leſs to ſuch as ſail'd at Sea. The height thereof ſinking, as it ſeem'd. And thereupon ſuppoſes the decay thereof, and of the World. But an Anſwer is at hand to this; That it might then perhaps decreaſe in magnitude. For it may be ſometimes, in ſome Ages, augmented; and ſometimes diminiſhed: But in the whole rather augmented. Or elſe; It was but a meer fancy and opinion. But theſe are known things. This one thing only hath, after a wonderful manner, tortur'd the wits of Philoſophers hitherto; In that they apprehend not whence the unſatiableneſs and greedy devouring of the perpetual fire ſhould be ſupply'd with new and new food alwayes. And how the Pumices, Cinders and Aſhes, and the other refuſes of burnt matter, ſhould in ſucceſſion of time be converted into new materials, fit for fires. Which knot, that it may be untied;

You may remember that before (elſewhere) we ſhewed; how that to the conſervation of Nature in its perpetual & conſtant courſe, there was a neceſſity of an everlaſting circulation and return round of things. In the Heavens, the Elements; the Air, Water, Earth, and its ſeveral ſorts, ſoils, and Minerals, *&c.* even with the very Fire alſo, and its materials and nutriment. As appears in the perpetual wheeling round of the Planets and Stars, by a conſtant and inviolable Law of Nature, ſo many thouſands of years. The perpetual motion and mutation of the Elements; alwayes unvariable in the greateſt variety of things. The perpetual circulation of waters, both within, and about the Earth. *All Rivers come from the Sea, and return to the Sea again*; as *Solomon*, the Wiſe, hath confirm'd to us. The Sun dries up the vapours of the Sea; the vapours are received into rain, and return back to the Earth and Sea again. Elegantly expreſſed by *Ovid*;

The Earth reſolv'd is turned into ſtreams;
Water to Air; the purer Air to flames.
From whence they back return; The fiery flakes
Are turn'd to Air; The Air thickned takes
The Liquid form of Water; That Earth makes.

Or, as *Dubartas* has it;

The pureſt humour in the Sea, the Sun
Exhales i'th Air; which there reſolv'd, anon
Return to Water, and deſcend again,
By ſundry wayes into his Mother Main.

Many therefore wondring whilſt they behold *Ætna* burning ſo many thouſand years, how the Mountain ſhould not be conſumed by ſo long and laſting Burnings, Nor the Fire ever extinct. But

Burſting wide ope its Fornace Mouth, ſtill ſtreams
With melted ſtones; ſtill ſpues out Globes of Flames.

And by a thouſand Fires, as *Virgil* expreſt it before,

It ſpending ſtill the fewel which it burns;
Yet ſtill to former ſtrength afreſh returns.

Theſe certainly, if they underſtood the circling operations of Nature, would not ſo ſtrangely admire; when as food is never at any time wanting thereto, to perpetuate the Burnings. The Fires burn the Mountain, and convert the Miſcellany, or mixture of combuſtible matter into Aſhes. Out of the Aſhes mixt with Water, a new food and nouriſhment of everlaſting Fire is generated;

Omnia continuo rapidos vertuntur in orbes;
Naturâ motus perpetuante ſuos.

Which may be engliſhed out of our Incomparable *Cowly*, altering a word from his extravagant alluſion to drinking.

Nothing in Nature's conſtant found;
But an Eternal courſe goes round.

This

This premiſed; I take for granted, *Firſt*, That a great plenty of Salt lies hid in the Aſhes: which even from hence is proved; That Salt is no wayes more eaſily got, than from a Lixive or Lee of things reduced into Aſhes. By this means Nitre, Salt, Allom, in ſome more moiſt places, breaking or ſpringing out of the walls and ſides, as alſo in the dunging-places of Pidgeons and other Animals, firſt vegitated and quickned with Urine, is dug forth in moſt plentiful ſtore and abundance.

I ſuppoſe for granted, *Secondly*, That out of the humid Sea, tinctured and ſeaſoned with a fat ſaltiſhneſs and mixture of other Mineral things; an huge quantity of Exhalations, together with the ſpirits, and inſenſible corpuſcles of the ſaid things, are extracted by vertue of the Sun. Which being both extrinſecally reſolved into Rain, Hail, Snows, ſettle about the top of the higheſt Mountains; and alſo intrinſecally deriv'd through ſubterraneous paſſages of the Sea, do fertilize the matter of the *Fire-houſes* under ground, with new provant.

Theſe things ſuppoſed, I ſay, That the Fire perpetually powerful, and waxing ſtrong in its *Store-houſes*, is alſo by occult fibres and veins of the Sea inſinuating and entering underneath, perpetually augmented; whilſt that it repleniſhes and recruits the matter conſum'd away with fire, (as are the Aſhes, and the moſt porous ſtones of Pumices) with a Sulphureous Soot, and Bituminous Spirits; And in ſome meaſure prepares and diſpoſes it for an enkindling and inflamation. But when by the melting of the Hail and Snow; both with the fervent heat of the Sun, and alſo with the heat of ſo near Fire lurking within; and by the coming on of Rain, the Duſt and Aſhes be ſoaked through with a moſt plentiful bewetting; From hence a certain mixt matter is propagated, which inſinuated more deeply within the porous receſſes and ſpaces of the Pumice-ſtones; And then Sulphurcous and Bituminous Spirits, which but now lately lodged there, intervening to their help; at length ends (preſently, as ſoon as it is waxen ripe) in a new food and nouriſhment of the Fire. And that this is ſo; I found by an irrefragable experiment, in the brinks and edges of the Valleys of *Ætna*, *Veſuvius*, and *Strongylus*, burnt up with Fire; in moſt of the Cindry and Aſhy walls and ſides of which I found an immenſe quantity of Salt, Allom, and Nitre ſpringing forth; In ſome alſo, a flowing and guſhing forth of Bitumen, Naphthe, and the like fat oily liquors, together with a moſt copious quantity of Sulphur. Which have their original

original from no where else; but partly out of the Cinders of combust and burnt things; from which must necessarily be begot a new off-spring and succession of Salt and Nitre; Partly from the Sulphureous corpuscles or spirits; which while they continually exhale from the lowest Gulph of the Mountain, are condensed into Sulphur in the more cold climate of the Mountain. And so that mixt matter is generated, out of Salt, Nitre, Allom, Bitumen and Sulphur, which insinuated (as hath been said) into the pores of the Calx or Calcined Lime, or Ashes of the burnt and adust Pumices and Stones, it administers that perpetual and everlasting fuel and food of Fire, which we have hitherto inquired after. For this, corrupted by the Fire, as it prepares new burnings; so the fat and sulphureous matter being burnt up, which lurk'd and lay dormant within the Pumices, undergo some respits, or truces, as it were; Till the capacity of the Pumices, and the remaining Calx, or Calcined Ashes, be replenished again, as was said, with the like new birth of combustible matter. But now what happens in the exteriour and outmost surface of *Ætna*; It's certain, the same is effected in all other flammivomous Mountains. Nature carrying it self after the same manner alwayes. Yea, he that shall more narrowly and throughly dive into these things, he cannot be ignorant, that the process of Nature, which we have expressed in the exteriour surface of the Mountain; but that it keeps the same course and tenour, or order, in its intimate and inmost *Fire-houses*, or Receptacles.

Corallary II.

Hence it follows, That the food and fuel of Subterraneous Fire, follows the Motion of the Sea, raging with a perpetual reciprocation of Flux and Reflux. For from the concitation and commotion of the Tide, The Sea being thrust through occult passages and Burrows, at its bottom; as hath already been inculcated; and joyning its fat and humid, to the hot and dry, lodging under Sulphureous Glebes, in the intimate bosoms of the Earth; restores that which is consum'd away, with an uncessant conception and birth of a new generation. But in the external surface, by vapours attracted from the Sea, and which are fruitful, and even big with the said new Geniture (or Generation) of the Sea, it lies within the porous Hives or Cells of the now burnt matter, through the Snows, Hails, Rains, mixt with the Dust and Ashes, a new Geniture or Concep-

tion; which in its time, the matter being now mature and ripe, may at length break forth into great Burnings. You see therefore the wonderful and indeficient Circulation of Nature in its operations.

Corollary III.

The formal cause of its burnings. From these things it follows, that the formal cause of the Burnings of this Mountain, is the Fire it self. The material; Sulphur, and Salt, Nitre, Bitumen, and the like matters apt to cherish Fires, propagated by a perpetual motion from the intimate dark recesses of the Earth, and also from the incumbent Sea plying thereon. The Instrumental; the Cavernous nature of the place; and the whole Body or Bulk of the Mountain wholly full of Burrows, and hanging together aloft, and pois'd of it self, and perpetually burdened, and oppressed with Sulphureous Smoak and Soot. Lastly, the efficient cause, are Winds and Blasts, which flowing out of the most inward Caverns at this kind of vent or issue, and as it were at their proper gorges and open jaws, excitate with certain Bellows, as we may so say, the dorment Fires, to enkindle the matter, whatsoever shall be found next. Sith all *Sicily* is wholly bored through with innumerable Caverns and Burrows, as was before mention'd. Else where we have abundantly demonstrated, the wounderful Ragings and Tides of the Sicilian Streight, and the alterations of its flux and reflux; and also the insatiable force of the devouring gulf of *Scylla* and *Charybdis*; and how that it depends on the said Mountain; being disposed after a wonderful way and manner, in Subterraneous Shops, and work-houses, throughout the universal Islands. Of which thing, this may be a clear Testimony; that *Charybdis* tumultuating after an unusual manner, *Ætna* also withal rages at the same time; being together with it, stirred up with the Spirit of Sedition and tumult; and the sulphureous dens recieving into themselves the more vehement winds and blasts, thereby the combustible matter, agitated and puffed, no otherwise then as with Smith's Bellows, burst forth violently into huge Globes of Flames.

The material;

The instrumental cause.

The efficient.

The Mountain ejects Fires according to the Winds. But other winds blowing, *Ætna* seems to take respit; for that the orifices of the passages are plac'd in a contrary way to the current waves and flouds of the Sea; and hindred by the neighbour Mountain. But at the East and South winds blowing, according to the constitution of the channels, now Flames, sometimes Smoke, now and then Embers, Sparkles, and Flakes. But sometimes, the Fuel being aug-

augmented in it ſelf, it wonderfully rages with burnings, with a formidable ſtream and floud of Fire and Brimſtone; which now and then it is wont to belch forth, out of the inmoſt ſhops of the æſtuaries of fire under ground; with an huge deſtruction and ruine of the ſubjected Villages, Fields, Cities, and Cattel. The forerunners of which, are groanings of the Caverns, from intercepted and ſhut-up Spirits; Roarings of the Sea, joyn'd with trembling of the Earth; By all which coming ſo thick together, Nature, as it were, overpreſſ'd, and impatient of bonds, breaks open all Priſon Doors and Barrs, and ruſhes any way it can get out; and like a burning River or Floud, conſumes, not only Fields, with the mighty rouling ſtream wherewith it is poured down, but alſo intire Villages; overturns neighbouring Towns and Cities; and every where leaving footſteps full of horrour; devours Woods, Rocks and Mountains; and nothing is able to ſtand in its way. Of which things the Monuments of Hiſtorians are full.

We conclude therefore, the matter of Subterraneous Fire to be not only Sulphur, Bitumen, Pit-Coals: but alſo Allom, Salt, Nitre, Coaly Earth, and *Calcanthum* or Vitriol, and ſuch kind of Metals. For Sulphur and Bitumen do not make the Fire ſo impetuous, as that Fire, which ſubverts Mountains, buries Cities in Aſhes, and the ejectments of Pumices; and by an incredible violence, belches out ſtony and Rocky Mountains, out of the very Mountains; as hath plainly appear'd from what hath preceded. But ſome other thing muſt needs be adjoyned thereto; to perform this effect, which we go about to explain.

What thing that may be which cauſes ſo great Ruines of the Mountain.

I ſay therefore that the univerſal matter of Subterraneous Fire, ought to be ſharp and thick or groſs, as Sulphureous and Bituminous matter are; whereto is joyn'd, with a great and neceſſary alliance of Commerce, Salt-peter; which having its ſubſtance repleniſhed with moſt tumid ſpirits, and joyn'd to Sulphur, and enkindled; whilſt it finds no *exit* or vent, it exerciſes that force upon the ſubterraneous obſtacles, that lye in its way; which a little before we have expounded, (eſpecially if crude Antimony, and Mercurial Spirits be ſuperadded;) as ſufficiently appears from the mighty efficacy of Warlike Guns and Cannons.

Furthermore, the combuſtible materials, they are not found but in Subterraneous Dens; of which ſort, are divers kinds of Stones, various ſpecies of terreſtrial Glebes, Metallick Mixtures and Miſcellanies of the other Minerals; And beſides theſe, Salt, Allom, Salt-

peter, Salt-Ammoniack, and whatsoever is there found, even to the very Water it self. And even Mountains, and huge vast Stones are turned into matter and nutriment of the Fire; Then forthwith the matter generated only burns; and this being consumed away, the Fire is extinguished; and changing its station, invades another near unto it; as comes to pass in Bituminous Earths. Then afterwards the consumed matter, conceiving new Seeds, springs again; and a good while after is enkindled; which indeed if it be by a sudden generation born again in great plenty, as in *Ætna*, *Strumbolo*, the Phlegræan Plains, then they will burn with an everlasting Fire.

But the Generation of such kind of matters is made after this manner: The Sea repleniſhed with fatness and unctuosity, while it enters the hidden Rooms and Chambers of the Earth, by and by nourishes anew the substantial parts of the Mountain extenuated with the Fire; and repleniſhes their substance, that hath lost its marrow and strength, with a new fatness; and if a way lie open into Sulphureous Vaults and Houses under ground, the water being driven in, will be turn'd into the nutriment of Sulphur; If into Bituminous places, into the nutriment of Bitumen; if into Aluminous veins, of Allom; And so of the rest, the same reason. And thus the Substances destroyed by the Fire, are repaired almost after the same way, that Iron is renew'd again in the Island *Elva*, the Mines for several years lying idle and fallow, as it were; and as stones, which they call *Travertine*, in the Fields of *Tivoli*.

But how the said matters should conceive fire, was above-said. As how indeed; scarcely from the Sun; not from Thunder and Lightnings; not from any other efficient: but from the very subterraneous fire it self, making its way unto them through hidden passages of the Rocks, which it burns. Or, if they be not immediately touched by actual Fire; then certainly from the Marine waves and billows, intruded by the force and impetuousness of the Winds, through the Submarine gutters and chinks at the bottom of the Sea. For that it cannot be that from the vehement dashing of the billows in strait and narrow places, and the agitation of the spirits of combustible matter thereby, and the attrition or striking of the fat and Sulphureous Air, that they should not presently conceive Fire.

Of

Of the Liparitan or Vulcanian Islands adjoyning, commonly called the Vulcanello's.

West of *Sicily* in the Tuscan Sea; but South and within sight of *Messina*, an hundred and fifty miles distant from *Ætna*, are the *Æolian Islands*, so called from *Æolus* King thereof. He taught at first the use of the Sail; and by observing the Fire and Smoak that ascended from these Islands, (for heretofore they all of them flamed) prognosticated of Storms to come. And thence the occasion of the Fable of *Æolus*'s being Godd and King of the Winds, for his admirable skill and invention that way. Of these anciently there were Seven only; (But now are Eleven; 'tis like made since out of the excessive burnings of the other; as 'tis said of the little one called *Vulcanello*) almost of an equal magnitude. Yet *Liparis* is the greatest, (being ten miles in circuit) as also the most famous, to which the others were subject. (And hence they are now call'd the *Liparitan*, and *Vulcanian* Islands, or *Vulcanello's*) Its fruitful and abounding with Bitumen, Sulphur, and Alumne; having hot Baths much frequented by the diseased. The Fire here went out about an Age agoe; having (as is to be supposed) consumed the matter that fed it. But at this day *Strombolo* only burns; and that with ragings not inferior to the *Ætnean* or *Vesuvian*. Yet *Volcano* smokes continually, from Subterraneous Fires. They are said heretofore to have burnt wholly, together with the Mountains, and Sea, as *Strabo* witnesses.

Volcano, formerly call'd *Hiera*, is a little Island, burning in the midst of the Sea; where Antiquity placed *Vulcans* Shop, or Forge; Because of the Fires seen by night, and abundance of smoak by day. And therefore received its name from its natute; consecrated formerly to *Vulcan*, and called his Mansion. It is said but first to have appeared above water, about the time that *Scipio Africanus* dyed. A barren Island, stony, and uninhabited. It had three Tunnels, wherewith it evaporated Fire; But now hath but one out of which it smoaketh continually, and casts out stones with an horrible roaring. It was heretofore all on Fire, and the Sea round about, for some dayes together, which *Pliny* reports, as a known truth, and an instance neer at hand. And has not ceased to be on a flame since, as it were a Mountain of flames only, in the midst of the Sea. For even in the

year

year of our Lord 1444, on the 5th of *February*, it flamed so abundantly, and flung forth fire and stones, with such an hideous noise; that not only the rest of the Islands; but also *Sicily* trembled thereat. Perhaps the last blaze. For now flame it doth not: but retaineth the rest of its terrours.

But now *Stromboli* is the most notorious at this day. Here the Inhabitants formerly were wont from the Smoak, to predict what Winds would blow. Where *Æolus* also, the first so skilled therein, was King, *&c.* as before. It was formerly call'd *Strongyle*, (corrupted at last into *Stromboli*) from the rotundity thereof. For it seem: no other than an high round Mountain in the Sea; out of the top whereof issueth continually a flame like a burning Beacon; and exceeding clearly; so that by night especially it is to be discern'd a wonderful way. A place so full of horrour to the Neighbouring-Islanders; (And yet in those parts where the Rage of the Fire offendeth not, it is of a very fruitfull Soyl, and apt for Tillage) and many others of the Ignoranter Romish Catholicks, conceive it (and such like places) to be the Jaws of Hell it self; and that within the damned Souls are tormented. To which purpose the good Catholicks (who are excellent at pious frauds and tales) have, or rather have rais'd, a pretty Story of Sir *Thomas Gresham*, *London's* most glorious Benefactor; which we shall by and by transcribe out of Mr. *Sandys's* Travels *verbatim*; True it is he was full of pious and charitable good works and bublick Benefactures in his latter dayes. But upon such an occasion, as this Story pretends; we have not the least reason to believe: For surely all our Histories and Memories could never have been wholly silent thereof; and of a thing so publickly attested before the King, *&c.* But to return to the business again.

Kircher, in the said often mentioned year 1638, thought good also to examine among others of these Islands, those two chief ones, *Volcano*, and *Stromboli*. And *Stromboli* indeed for the fierceness and outrages of its Fires, which it continually vomited, was guarded from all access. But *Volcano* making Truces and Intervals with the Æstuaries, discover'd nothing else besides Smoak: Yet it hath an Island adjoyning, call'd *Volcanello*, annexed to *Volcano*, which they relate to have been generated of the rejected refuses and offalls of the Mountain, which it belch'd forth out of the last burning thereof; (perhaps that in the year 1444, a little before mentioned) All the Island springs and abounds with Sulphur, Nitre, Bitumen;

Yea

Yea and the very bottom of the Sea is burrow'd through with innumerable Caverns and Tunnels or Trunks; which both the *Vortices*, or Whirlpools, and also the frequency of Winds bursting forth, and puffing the Sea after a wonderful manner, do shew. And this made our Author, as himself acknowledges, that he could in no wise dissent from those, who say, There are Submarine Mines and Burrows under the Sea; which correspond with *Ætna*; and thence, by continued passages and conveyances, through the concavous spaces of the Back of *Appenine*, with *Vesuvius*; which he, a present and Eye-witness, found most true in the said year 1638. when in his return home from these Travels, he was driven on the Coasts of *Terra di Lavore*, in the Kingdom of *Naples*, which he found almost reduced unto utter ruine and desolation, at the same time, by most horrible Earthquakes; wherein he very narrowly escaped himself with his life; and accordingly hath writ very sensibly and feelingly thereof; too large for this place. But on a certain day more curiously viewing *Stromboli* at this time, about sixty miles distant, he observ'd it to be more than ordinarily furious: For it appear'd wholly overwhelm'd with Fire, in so great plenty, that it seem'd to belch out flamy Mountains; (A most horrendous spectacle!) And then heard I know not what kind of dull murmur from the Mountain so far off, which time after time seem'd to grow towards them through Subterraneous Burrows, till it reached the subterraneous place, on which they stood; and there utter'd such horrendous Thunderings within the Earth, with so formidable Earthquakes, that none of the company were able to stand on their feet. After the Violence was over, getting up again, not without ineffable consternation, they beheld the Subversion and lamentable Catastrophe of the most famous Town *St. Euphemia*, three miles off, (which happened in that time;) and the City wholly swallowed up. For, seeking for the Town, they found in stead thereof, (wonderful to be spoke!) nothing but a most putrid Lake sprung up in its place. They could find no Men, nor Inhabitants: Thence passing on their Journy, they found nothing else for two hundred miles, but the Carkases of Cities, horrid Ruines of Castles, Men straggling up and down in the open Fields, and through fear, as it were, withering away. Then passing by *Naples*, he could not after all this, leave out *Vesuvius* out of the way of his Observations; what that did also; Of which

before

before in its place. And this was a leading us to another Chapter, concerning Earthquakes, as the proper effects and products of Subterraneous Fires also; and alwayes preceding, and concomitant with these Vulcanian Eruptions; But that we found a Chapter was not sufficient for so great a Subject; and that we had already transgressed and exceeded the intended and prescribed bounds of *This*.

FINIS.

A fuller Relation of the Spaniſh *Prieſts Error and attempt, about getting Gold out of one of theſe flaming Mountains in the* Weſt-Indies.

THE moſt famous Vulcano's in the *Weſt-Indies*, are the *Guatamala*, diſcernable at vaſt diſtance on the South-Sea. A *Spaniſh Prieſt* out of Avarice would needs ſound this Mountain, ſuppoſing the bottom to be full of Gold. This Prieſt was called *Moſſen*, born at *Antequera*, who came to the *Indies* with *Pirarow* at the time of *Ferdinand Cortez's* Conqueſt. He had a Siſter living with him who had a fair Daughter, whom the Captain married to *Lazart d' Almadia*, Clark of the Ship, promiſing 1000 Duckets in Marriage. But the Clark being jealous of his Captain, left his Wife in *Spain*; and the Captain being come on Shore, with grief for his Miſtreſs abſence, died; to whom by his laſt Will he ratified the 1000 Duckets. Mean while the Clark took command of the Veſſel, and arrived in *New Hiſpaniola*, where the Prieſt was very welcome, Prieſts being there very acceptable; and was accommodated in the Town of *Sanda*, where he lived in great eſteem for ſincerity and devotion; ſo in few years he grew very wealthy. But not content with this, upon ſuggeſtion that the flaming Mountain, not far thence, was a Mine of Gold, he thought to get ineſtimable riches out of it: for this purpoſe he cauſed a ſtrong Iron Chain to be made, to the meaſure of the height of the Mountain, which he had taken by Artizans; then by ſtrength of Men began to cut a way for portage of his neceſſaries, which could not be done but at great expence, a mans labour there being worth two Crowns a day; nevertheleſs Avarice made him paſs it eaſily. But this beginning was a mean matter, for he muſt continue the Labours; being yet not advanced far, by reaſon of the height of the Mountain, and firmneſs of the Rock, which he muſt cut through: nor though many looked upon the Enterprize as extravagant and inconſiderate, yet the Prieſt every day got nearer to the mouth of the Fornace with expence of time, labour and difficulty. After four moneths ſpace

the pondrous Chains and Caldrons, with great coſt and pain were drawn up. The good man boaſted, *He doubted not now to come ſhortly to his ends*, and that he had *a Revelation* of it in his ſleep.

At length all theſe Iron Engines were ſet in order, and the workmen, to the number of fifty began to let down a Caldron well faſtened to a ſtrong Iron Chain, with other Engines ſecured, and the Prieſt himſelf ſet his hand to the work: But as they thought to draw up the Caldron full of rich melted mettal, the ſtrength of the fire conſumed all, and they hardly eſcaped without burning their hands and feet, ſo violent a heat burſt out upon them. The Prieſt *half mad cried out*, *The Devil had broken his Chain*; with a thouſand Curſes, ready to throw himſelf headlong into the Precipice, covered over with Soot and Cindars, and frying with heat, fright, and toyl, that he looked like a right Fury, running like a mad man to and fro; the reſt in little better condition, the greateſt part being lam'd and conſum'd with labour and the violence of heat which had even melted them. The good man at laſt was brought to his Lodging in extream torment, where they laid him to bed in ſo much grief and diſcomfort that he was the pitty of the World. Walking in the night he was ſurprized with ſuch a rage, that he gave himſelf ſeveral ſtabs in the throat with his knife; and in the morning his Siſter coming to viſit him, found him ſteeped in blood and gaſtly, half dead, whereupon ſhe cried out for help, and friends came immediately in, and a Chirurgion applyed the Country Balſom ſo fortunately to his wounds, that he was well within few dayes; nevertheleſs for extream grief and ſullenneſs, he could eat nothing; At laſt he languiſhed to death, having conſumed all he had gotten, beſides what his Siſter had alſo, and other Friends, whom he quite ruined. The poor woman lived a while after, but miſerably. Her Son-in-Law making ſome Voyages betwixt the *Indies* and *Spain* in the beſt ſort he could; who afterwards had other ſtrange miſfortunes upon his Wifes account, eſteemed the Daughter of that *Unfortunate Prieſt*. Thus do greateſt diſappointments procure the greateſt deſperations.

London, (if the Story were true) accidentally beholding to flaming Mount Strombolo.

If all the pious Tales of Catholicks were true, *London* was eternally beholding to the good Devils of *Strombolo*, for frighting Sir *Thomas Greſham* into ſuch Publick good Deeds; But why he ſhould begin

begin to practise them at least eighteen years after the death of King *Henry*; and how many before had passed we know not, and that not till the dayes of *Reformation*, (for he laid the first Stone of the *Royal Exchange* in the seventh year of Queen *Eliz.* Or why neither Catholick nor Protestant Historians should so much as mention, much less record for truth, so remarkable a Transaction, concerning so glorious and Renowned a Founder, no tolerable account or reason can be given. However take the Story as it runs in *Sands's Travels*, thus.

A pretty devised Story and Catholick pious Tale concerning the occasion of Sir Tho. Gresham's *devout Life, and pious and charitable Inclinations and good Deeds, and the converting his great acquired Riches, to such worthy and publick uses*, Viz. *From the sound of an horrid Voice, out of the mouth of one of these Hellish* Volcano's, *the Prodigious Mount* Strombolo.

It was told me at *Naples* by a Country-man of ours, and an old Pensioner of the Popes, who was a youth in the days of King *Henry*, That it was then generally bruited throughout *England*, That Mr. *Gresham* a Merchant, setting sail from *Palermo* (in *Sicily*) where there then dwelt one *Antonio*, called *The Rich*, who at one time had two Kingdoms morgaged unto him by the King of *Spain*, being crossed by contrary winds, was constrained to anchor under the Lee of this Island *Strombolo*. Now about mid-day, when for certain hours it accustomedly forbears to flame, he ascended the Mountain, with eight of the Sailers, and approaching as near the vent as they durst, among other Noises, they heard a Voice cry aloud; *Dispatch, Dispatch, The Rich* Antonio *is a coming*. Terrified herewith they descended; and anon the Mountain again evaporated fire. But from so dismal a place they made all the haste that they could; when the wind still thwarting their Course, and desiring much to know more of this matter, they returned to *Palermo*, and forthwith enquiring of *Antonio*, It was told them that he was dead; and comparing the time, did find it to agree with the *very Instant* that the Voice was heard by them. *Gresham* reported this at his return, *to the King*, and the Mariners being called before him, confirmed by *Oath* the Narration. In *Gresham* himself, as this Gentleman said, (for I no otherwise report it) it wrought so deep an impression, that he gave over all Traffick; distributing his Goods part to his Kinsfolkes

folkes, and the rest to good and publick uses; retaining only a competency for himself; and so spent the rest of his Life in a solitary devotion.

A very ill contrived Story, attended with no probable circumstances. 'Tis like indeed it might be generally bruited, as the Gentleman says (among the Vulgar, by some that would have had it so) but never could obtain general credit, among the wiser at least, and more knowing, much less ever to be recorded, because so easily confutable.

FINIS.

ERRATA.

Candid Reader,

If thou wouldst make true sense of what thou readest, thou must needs first correct, at least these grosser Errata's, *which quite and clean pervert it.*

Page 5. line 11. For *Stagnete*, reade *Stagnate*. P. 7. l. 7. Blot out *Canary Islands*, And add to that Section, of that Chapter, thus much further: *Historians* of these times write also, That even *Teneriff* in the *Canary Islands*, now and then smokes out of the top of its crown; and to have sometimes heretofore burnt, and vomited Flames, The Sulphureous Stones testifie, which in great plenty are brought into *Spain*. It abounds also with hot Baths, and Bituminous Fountains, which are manifest tokens of Subterraneous Fires in those *Atlantick Seas* lurking underneath.

Pag. 8. l. 4. for *Vulcano's*, read *Vulcanello's*. P. 9. l. 2. for *Island*, read *Islands*. P. 10. l. 29. f. *Mothern*, r. *Northern*. P. 23. l. 20. f. *Fire*, *Sulphur*, r. *Fir'd Sulphur*. P. 29. l. 33. f. *ratifie*, r. *rarifie*. P. 32. l. 9. f. *shone*, r. *shewn*. P. 33. l. 3d from the bottom, f. *could*, r. *they could*. P. 36. l. 20 f. *discuse*, r. *discusse*. P. 47. l. 23, and 24. No doubt instead of 400 and 400 miles, it should be 3 and 4 miles; though so in our Author. P. 48. l. 6 from bottom; f. *Rocks verge*, r. *Rocks; verge, &c.* P. 57. l. 3. from bottom; f. *lies*, r. *layer*. P. 58. l. 14 from bottom; f. *Islands*, r. *Island*. P. 62. l. 14. from bottom; f. *Memories*, r. *Memoires*. Besides many lesser faults, which are left to thy own discretion in reading.

X60552